Washington Park

ARBORETUM BULLETIN

Published by the Arboretum Foundation
for the University of Washington
Volume 52, No. 1, Spring 1989 $2.50

ELISABETH C. MILLER LIBRARY
CENTER FOR URBAN HORTICULTURE
UNIVERSITY OF WASHINGTON, GF-15
SEATTLE, WASHINGTON 98195

Center for Urban Horticulture
Harold B. Tukey, Jr., Ph.D.
Director of Arboreta
Brian O. Mulligan
Director Emeritus
The Washington Park Arboretum
Timothy Hohn
Curator, Plant Collections
John A. Wott, Ph.D.
Professor,
Continuing Education
Lynda J. Ransley
Coordinator

Officers of The Arboretum Foundation
Richard Doss
President
Carol Simons
First Vice-President
Tina Kuhnle
Second Vice-President
Mary Booth
Third Vice-President
Alan Adams, D.D.S.
Fourth Vice-President
Jeannine Curry
Secretary
Keith Patrick
Treasurer
Elizabeth Ayrault Moses
Immediate Past President
Rae Tennyson
Executive Secretary
Rita Lambro
Bookkeeper

Editorial Board of the *Arboretum Bulletin*
Jan M. Silver
Editor
Nancy Ballard
Van M. Bobbitt
Mary Booth
Leroy P. Collins
Valerie Easton
Book Review Editor
Kenneth Gambrill
Stanley P. Gessel, Ph.D.
Clement Hamilton, Ph.D.
Daniel Hinkley
Timothy Hohn
Steven R. Lorton
B.J.D. Meeuse, Ph.D.
Brian O. Mulligan
Jan Pirzio-Biroli
Ruth E. Vorobik

Advertising Manager
Susie Marglin (325-4510)

Concerning This Issue . . .

It is Washington State's centennial year and this issue joins in the celebration. The Arboretum is under 100-years old, but its history is intriguing and important.

I told Director Emeritus Brian Mulligan that *The Bulletin* is featuring a 1989 series on his contributions to the Arboretum, starting with this historical issue.

"Brian, you're the missing link," I said hoping he would like the idea.

"I'm not missing," Brian rejoined, for which we are all grateful. The first of four articles, penned by Jan Pirzio-Biroli, documents Brian's legacy of vines that you see climbing trunks and dangling from canopies throughout the Arboretum.

The history of Pacific Northwest botanical exploration by Europeans dates from the eighteenth century and Native American lore is centuries older. Laura Lipton elaborates within.

"The Tree Place," by Timothy Hohn, defines *arboretum* and our links to historical European and American arboreta. Catherine Joy Johnson then explains the grand plan of Washington Park Arboretum, designed by successors of Frederick Law Olmsted. Is it *Foster* Island or *Foster's* Island? Valerie Easton explores the origin of a name.

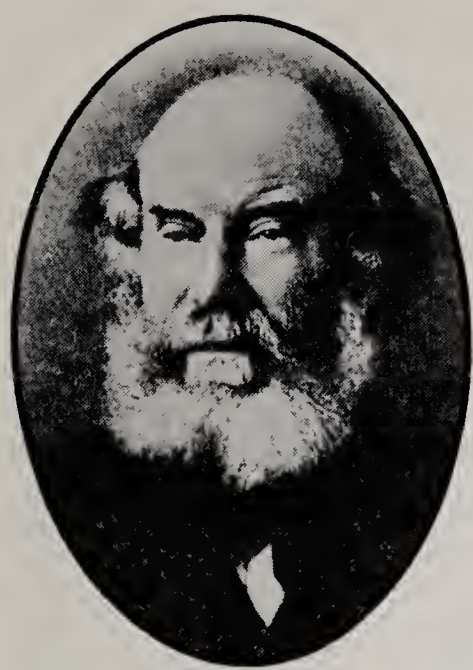
Finding and identifying historical trees is an important art. Jerry Clark and Arthur Lee Jacobson tell how, and Ulrike Hilborn discovers the Arboretum's oldest original accession.

David C. Streatfield explains the importance of landscape preservation and restoration to the Pacific Northwest and U.S. as a whole.

Later, we catch a glimpse of the Arboretum's "Tolkienesque" stone cottage by former occupant Daniel Hinkley. Van M. Bobbitt's "Northwest Hort Review" and Scot Medbury's description of the Northwest's *oldest* arboretum round out this issue, along with book reviews and "In the Arboretum."

I wish to thank four people—important links themselves—whose *Bulletin* board tenures are completed. Nan Ballard, Jan Pirzio-Biroli, Rip Collins, and Stan Gessel have added immeasurably to the *Bulletin's* successes. It is difficult to let them go, so we won't: Their articles will appear in many issues to come. No missing links for *The Washington Park Arboretum Bulletin*

Jan Silver, Editor
The Washington Park Arboretum Bulletin



Page 2

Page 14

Cover: The stone cottage in the Washington Park Arboretum. Photographed in the 1940s by Jon Wallace Rasmussen.

CONTENTS

2 . . . . . Explorers and Plants: A Botanical History of the Pacific Northwest *by Laura Lipton*

4 . . . . . The Tree Place *by Timothy Hohn*

6 . . . . . In the Arboretum by *Christina Pfeiffer*

7 . . . . . Pioneering Seattle's Historical Trees *by Jerry Clark* and *Arthur Lee Jacobson*

9 . . . . . In Search of the Oldest Tree *by Ulrike Hilborn*

10 . . . . . Brian Mulligan's Legacy of Vines *by Jan Pirzio-Biroli*

12 . . . . . Northwest Garden Explorer: The Northwest's Oldest Arboretum *by Scot Medbury*

14 . . The Olmsted Designs for the Washington Park Arboretum *by Catherine Joy Johnson*

18 . . . . . Landscape Preservation and Restoration in the Pacific Northwest *by David C. Streatfield*

22 . . . . . A Light in the Cottage *by Daniel Hinkley*

24 . . . . . The Naming of Foster Island *by Valerie Easton*

25 . . . . . Northwest Hort Review: Wound Dressings for Trees *by Van M. Bobbitt*

26 . . . . . Book Review: *Garden Style* reviewed *by Mary Booth*

26 . . . . . For Further Information *by Valerie Easton*

28 . . . . . New on the Shelves of the Elisabeth C. Miller Library

28 . . . . . Errata

The Washington Park Arboretum Bulletin is published quarterly, as a bonus of membership in the Arboretum Foundation. The Arboretum Foundation is a non-profit organization that was chartered to further the development of the Washington Park Arboretum, its projects and programs, by means of volunteer hours and fund raising projects. The Washington Park Arboretum is administered through cooperative efforts between the University of Washington, the Center for Urban Horticulture, and the City of Seattle Department of Parks and Recreation. The programs and plant collections are a responsibility of the Center for Urban Horticulture.

For membership information, write to The Arboretum Foundation, University of Washington (XD-10), Seattle, WA 98195 or call (206) 325-4510. Articles on gardening and horticulturally-related subjects are welcome. Please call for guidelines. For permission to reprint any part of the *Arboretum Bulletin*, please contact the Arboretum Foundation for written permission.

© 1989 The Arboretum Foundation.

For information about the activities of the Arboretum Foundation, call (206) 325-4510, and for information about public programs and lectures of the Center for Urban Horticulture, please call (206) 543-8800 or 545-8033.

Explorers and Plants: A Botanical History of the Pacific Northwest

by Laura Lipton

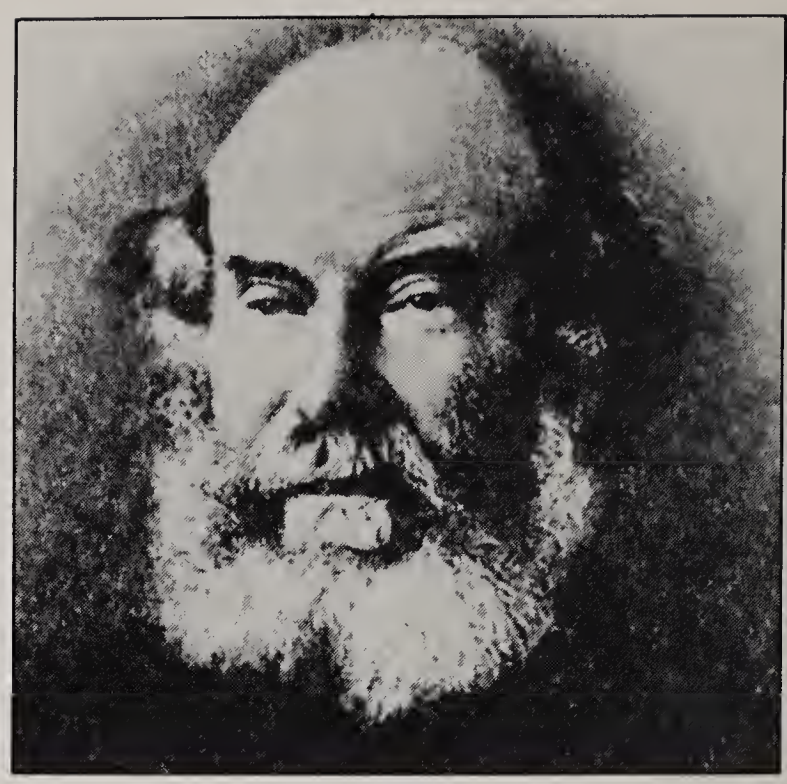
Washington is a relatively young state. By the time that statehood was declared in 1889, most of the famous explorer-botanists and plant collectors had come and gone, leaving their legacy in the names of our native plants: Archibald Menzies (*Arbutus menziesii*), David Douglas (*Spiraea douglasii*), William Clark (*Clarkia elegans*), William Fraser Tolmie (*Tolmiea menziesii*), Meriwether Lewis (*Lewisia columbiana*), and John Charles Fremont (*Fremontodendron*).

Before and during the 1800s, many Europeans explored the western coast of North America. One of the most notable was Archibald Menzies, a member of George Vancouver's expedition of 1791-1795, who was the first European to gather plants along the coast of what is now Washington State. Among the discoveries of Menzies were salal, bigleaf maple, and arbutus. He also discovered the Douglas-fir (now *Pseudotsuga menziesii*) and took twig specimens back to England where it was illustrated and described for the first time as *Pinus taxifolia* in A. B. Lambert's *A Description of the Genus Pinus* (1803).

A notable explorer of the early eighteenth century was David Douglas, a Scotsman sent over by the Horticultural Society of London (now the Royal Horticultural Society). It was David Douglas who collected the cones and seeds of what Lambert later called *Pinus taxifolia* (Douglas-fir). In the 1832 edition of his work Lambert changed the name to *Pinus douglasii*. The Miller Library has this historic work, a gift of Prentice Bloedel.

Douglas explored the interiors of Washington, Oregon, and southern British Columbia from 1825 to 1827, and again from 1830 to 1834. His experiences are recorded in *Douglas of the Forests: The North American Journals of David Douglas* by J. Davies, and the biography, *Douglas of the Fir* by A.G. Harvey.

Douglas collected both plants and seeds, and introduced many Northwest natives into cultivation



Dr. William Fraser Tolmie.
From Evans History of the Pacific Northwest.
(UW negative no. 2420).

in Europe. Of this great collector, A.G. Harvey says:

> With most people his memory will be kept alive by the plants, shrubs, and trees that he introduced. Gardens and grounds throughout the world abound with them. Hardly a garden exists that does not have the Clarkia, mariposa lily, California poppy, or some of the lupines, phlox, penstemons, mimulus, or others of his beautiful flowers. Towering over all is the great tree, the Douglas-fir, for which he is chiefly remembered.

Another Scottish botanist, Dr. William Fraser Tolmie, was the first botanist to climb Mt. Rainier (1883). The specimens he collected, including the common piggyback plant (later named *Tolmiea menziesii*), are now in the Kew Herbarium in London. Tolmie decided to start a library at Fort Vancouver, where he was stationed; it became the first circulating library on the Pacific Slope.

The exploring expeditions that were sponsored by the United States government in the 1800s began a whole new chapter of botanic history in the region. Throughout the nineteenth century, botanical specimens were collected on many of the government-sponsored geologic expeditions, military expeditions, boundary surveys, and transportation surveys.

One of the best-known expeditions was that of Lewis and Clark, from 1804 to 1806. It was charged by President Thomas Jefferson to discover what lay west of the Mississippi River. The expedition pushed westward all the way to the mouth of the Columbia River and brought back to Philadelphia

hundreds of plants and seeds, many of them never before known. Because the explorers reached their Washington State destination in late November 1805, their journals contain far more entries about the "rain, constant rain" than about the plants they collected.

Lewis and Clark intended to describe their botanical collection in a flora; however, publication was not achieved before Meriwether Lewis's death in 1809. Somehow, the specimens came into the possession of Frederick Pursh. Pursh claimed that Lewis had given them to him, although some of his fellow botanists believed that they were intended for Pursh's superior, Benjamin Smith Barton. The controversy is described by Susan Delano McKelvey in her *Botanical Exploration of the Trans-Mississippi West* (a gift to the Miller Library by Unit 18 of the Washington Park Arboretum). In any case, Pursh carried the specimens to London and published his *Flora Americae Septentrionalis* in 1814, thus describing and illustrating many of our Northwest native plants for the first time in a published work. At least six new genera were included. Color plates were made, many by William Hooker, to illustrate *Lewisia*, *Clarkia pulchella*, *Mimulus lewisii*, *Ribes sanguineum*, *Gaultheria shallon*, *Monarda*, *Berberis aquifolium*, and *Rubus spectabilis*. A copy of Pursh's historic two-volume work is in the Miller Library, a gift of Prentice Bloedel in memory of Pendleton Miller.

Another famous expedition was the Wilkes Expedition of 1838 to 1842, in which naturalists William D. Brackenridge and Dr. Charles Pickering collected 50,000 specimens, including the never-before-described *Darlingtonia*, a native pitcher plant of Oregon and California. These specimens formed the core of the United States National Herbarium in Washington, D.C. The expedition's route through Washington State is outlined in Piper's *Flora of the State of Washington*.

By the time of statehood in 1889, Washington began to have its own resident botanists. Many are described in John H. Thomas's *Botanical Explorations in Washington, Oregon, California, and Adjacent Regions*. A few of Washington State's early botanist-authors mentioned in this work are Charles Vancouver Piper, author of several local floras, and Theodore Frye, George Neville Jones, and Charles Leo Hitchcock—all of the University of Washington. The University of Washington founded its herbarium in 1880, and the Seattle Park Board passed a resolution designating all of Washington Park for an arboretum in 1924.

The Indian residents of the Pacific Northwest were botanists in their own right. Erna Gunther, in her *Ethnobotany of Western Washington: The Knowledge and Uses of Indigenous Plants by Native Americans*, gives us many clues to their uses of plants, not only for food, but for medicinal and artistic purposes, as well. Camas root was a staple food, cedar bark was used for clothing and basketry, buds of cedar were chewed to ease toothache and boiled into tea for colds, kinnikinnick leaves were smoked as tobacco, and the bracket fungi were used both as a deodorant and a target for archery.

The literature of botanical exploration and discovery is almost as rich as the variety of plants themselves in Washington State. Surely there is enough material to provide a wealth of enjoyable reading and research for our next 100 years, or at least for this centennial year.

Laura Lipton is a reference librarian at the Center for Urban Horticulture, University of Washington, in Seattle.

More Reading

The journals, engravings, and books by and about these explorers form a core collection of materials on the botanical history of the Pacific Northwest. Most are available in the Elisabeth C. Miller Horticultural Library at the Center for Urban Horticulture, University of Washington.

Davies, J. *Douglas of the Forests: The North American Journals of David Douglas*. Seattle: University of Washington Press, 1980.

DeVoto, Bernard. *Journals of Lewis and Clark*. Boston: Houghton Mifflin, 1953.

Harvey, A.G. *Douglas of the Fir: A Biography of David Douglas, Botanist*. Cambridge: Harvard University Press, 1947.

Lambert, Aylmer Bourke. *A Description of the Genus Pinus*. London: Weddell, 1832.

McKelvey, Susan Delano. *Botanical Exploration of the Trans-Mississippi West, 1790-1850*. Jamaica Plain, MA: Arnold Arboretum, 1955.

Menzies, Archibald. *Menzies Journal of Vancouver's Voyage*. Victoria, British Columbia: Archives of British Columbia, memoir no. 5, 1923.

Piper, Charles V. *Flora of the State of Washington*. Washington, D.C: Government Printing Office, 1906.

Pursh, Frederick. *Flora Americae Septentrionalis*. London: White Cochrane, 1814.

Thomas, John H. *Botanical Explorations in Washington, Oregon, California and Adjacent Regions*. Pittsburgh: Hunt Institute, 1969.

United States Exploring Expedition: Botany. Volumes one and two. New York: Putnam, 1854.

The Tree Place

by Timothy Hohn

Understanding what an arboretum *is provides a firm basis with which to follow the Washington Park Arboretum's historical perspective.*

"Traffic is backed up on 520 past the Arboretum." When I hear the daily traffic reports for Seattle-area commuters, I can't help but gloat over my good fortune to find a house within walking distance of the Washington Park Arboretum. I find it ironic that these daily radio and television broadcasts probably constitute the Arboretum's broadest-reaching public awareness message.

The other side of this coin is the Arboretum's negative association with snarled traffic. I often wonder how many of those car-bound listeners have any idea what the Arboretum is, besides a convenient demarcation point for the measure of traffic backup.

What Is an Arboretum?

The term *arboretum* comes from the Latin *arbor*, meaning tree, and *etum*, a suffix that designates place. *Arboretum* means "the tree place." However useful as a simplified point of reference, this definition does not clarify the role of an arboretum in society.

Arboretum is more thoroughly defined as "a living museum of woody plants for the purposes of education, conservation, research, and display." Woody plants are usually thought of as simply trees and shrubs. *Botanical garden* can be defined in a similar manner, but it also contains herbaceous plants.

Arboretum History

The first scientific arboretum was established in France in the middle of the eighteenth century. It was started by the head of the French Marine, Duhamel du Monçeau, who gathered large collections of trees from Europe and North America for his two estates at de Veigny and du Monçeau. The collections were said to contain 1,000 species of woody plants belonging to 191 genera. In Europe, one of the more important dendrological sites is the Arboretum des Barres, in France. It was established near Loiret in 1825 by Pierre Philippe Andre de Vilmorin. The Washington Park Arboretum has received many valuable accessions from this arboretum, as well as from other established botanical institutions whose gifts give us a link to European history.

One of the largest collections of temperate zone trees and shrubs can be found in Great Britain in the systematic arboretum at the Royal Botanic Gardens, Kew, which was started in 1848 by Sir William Hooker.

The earliest collection of trees in North America was established by John Bartram in 1728 at his farm and botanical garden on the banks of the Schuylkill River in Philadelphia, Pennsylvania. Through the remainder of the eighteenth century and during the nineteenth century, many such private collections were established by enthusiastic philanthropists, such as Humphrey Marshall, John Evans, Henry Winthrop Sargent, Horatio Hunnewell, Josiah Hoopes, Charles Dana, and other professional and amateur collectors.

The earliest public arboreta developed in North America are the Highland Park Arboretum (Rochester, New York), and the Arnold Arboretum of Harvard University (located in Jamaica Plain, Massachusetts). The arboretum in Highland Park is well known for its large collections of lilacs and crab apples, among other woody plants. The Arnold Arboretum was established in 1872 and designed by Frederick Law Olmsted, Sr. It is world-renowned for its extensive collections, as well as influential directors, among these Charles Sprague Sargent and Donald Wyman. Both of these institutions, as well as the Brooklyn Botanic Garden, have been valuable sources of new plants for the Washington Park Arboretum. We, in turn, have sent many unusual specimens to them.

Acer grosseri *var.* hersii *at the historic Arboretum des Barres, France, June 12, 1973. Seed was given to the Washington Park Arboretum in 1956. Photo by Brian Mulligan.*

A Living Museum

Looking back at the definition, what exactly does it mean to be a "living museum"? Generally speaking, museums are cultural institutions that collect and document items of historical, cultural, or scientific interest in enlightened anticipation of future display, education, research, and conservation needs.

The "items" collected and documented by an arboretum are living, woody plants—a living collection of trees and shrubs. Arboreta share their distinction as a living museum with zoological parks, aquaria, and other institutions that maintain documented living collections. It is this museum role, and the associated programs, that distinguish arboreta and botanical gardens from parks the same way that zoological parks and aquaria are distinguished from menageries.

Museums, including arboreta, share similar programming and staffing needs. Perhaps most important is the appropriate curation of their collections, which is the curator's charge. The curatorial position is unique to museums. It is held by an individual familiar with and knowledgeable of the items in the collection—their care and conservation—and the management of the collections as a conceptual entity. The curator's job is to manage the acquisition, documentation, and conservation of items in the collection and to determine the appropriate contexts for their display in a manner that reveals their peculiar characteristics and relationships.

Fulfilling the Display, Education, Conservation, and Research Functions

Display

Arboreta differ from other museums in that nearly all of their collections are on permanent display. The Washington Park Arboretum collections are accessible to the public at all times—a condition that severely limits the degree to which we fulfill our conservation, research, and education functions.

The display of the collection should be done in a context that is aesthetic and reveals some of the unique characteristics and/or relationships of the plants. This sets the stage for comprehensive educational programming, among other things. Accordingly, display contexts usually follow some theme based on taxonomic relationships, geographic origins of plants, landscape uses, or ecology.

In the Washington Park Arboretum, plant collections are displayed primarily according to their taxonomic relationships—plants in the same family or genus together. Display contexts that are based on landscape uses, plant geography, and plant ecology will be used more extensively in the future. An example of a display based on landscape uses of plants is the Joseph A. Witt Winter Garden (located across Arboretum Drive from the Graham Visitors Center and south).

Education

In its most basic form, the educational function of an arboretum is carried out through various interpretive services. The most rudimentary of these are identification labels for the collections. These are present on most plants in the Washington Park Arboretum collection and are either green plastic or metal embossed.

Beyond this, arboreta invest in all levels of on-site interpretation so that visitors can use self-guided signage and brochures, or learn from staff guided tours. Educational services are rounded out by classroom instruction, group programs, and publications. The intention is to offer programs that will provide everyone with a better understanding of plants, their natural history, and their relationship to people.

Conservation

Often, when we think of the conservation role of arboreta, we focus on the preservation of endangered or threatened plants. However, the core of our conservation program is the deliberate, thoughtful preservation of the *entire* plant collection through responsible and appropriate propagation and maintenance practices. Beyond that, specific programs to preserve endangered species would be a special focus.

At the Washington Park Arboretum, we are primarily concerned with basic conservation and, therefore, we are constantly looking for ways to improve our maintenance program.

The Arboretum is unsecured and accessible to the public at all times, which poses a problem for certain types of conservation. It would not be responsible for us to pursue special programming to preserve endangered species in light of the potential damage to these collections from vandalism, dogs, and other careless uses.

The basic value of conservation is its inherent value to our education, research, and display functions. In addition, the use of plants by humans tends to be dictated by short-term needs and, in the case of ornamental plants, fads. Arboreta conserve their collections in "enlightened anticipation of tomorrow's needs" regardless of current trends.

Research

Research programs at arboreta range from the simplest documented observations to basic research

in plant physiology. At the very least, a useful form of research is to observe and document changes in the development of the collections, and their responses to the environment. It is a basic research function of arboreta to observe and document observations on plant hardiness, seasonality of development, and taxonomy. Research on the cultural, propagation, and production requirements of plants in the collection is also basic to the function of arboreta. A necessary part of arboretum research includes field studies of plants in the wild concerning various aspects of their ecology, breeding biology, and geographic distribution. Such studies directly affect the conservation of those plants in the collection and provide relevant background information for the development of educational displays.

In the Washington Park Arboretum, fieldwork, such as my work in New Zealand and Dr. Clement Hamilton's study in Chile, results also in the procurement of new species, or forms of species, for conservation and possible introduction to the nursery trade.

The museum functions and supporting programs described above are made relevant and given credibility by the records and other documentation maintained by the museum on its collections. This documentation serves to substantiate and authenticate the true nature of the collection and provides the necessary validity required for it to be a useful reference. Arboreta and botanical gardens are valuable cultural and scientific resources. The next time the Washington Park Arboretum comes to mind, whether stuck in traffic or otherwise, think "living museum."

Tim Hohn is the curator of the "living collections" of the Center for Urban Horticulture, which includes the Washington Park Arboretum.

In the Arboretum

by Christina Pfeiffer

The winter of 1989 took its toll on many of our favorite garden plants, but flowers here still were plentiful this spring at the Washington Park Arboretum. Azaleas, rhododendrons, cherries, magnolias, forsythias, dogwoods (*Cornus*), sorbus, dove trees (*Davidia involucrata*), and redbuds (*Cercis*) have displayed good bloom.

Among the plants damaged by the winter weather were the flower buds on many cultivars of camellia, and leaves and twigs of hypericum, pyracantha, sarcococca, berberis, buddleia, daphne, and arbutus. A full report will appear in the summer issue of the *Bulletin*.

We are continuing to monitor the regrowth of many damaged plants. New buds and shoots have emerged on some plants, such as the escallonia, which appeared to have been more severely damaged.

New Plantings

The bank and path area across Arboretum Drive from the Visitors Center has been redeveloped over this past year. The Seattle Parks Department staff regraded the bank edge, installed the path and stairs, installed the low rock wall, and repaired the irrigation system. The renovation of this area was needed as a result of regrading which occurred during the construction of the Visitors Center. Arboretum staff planted the area with a selection of material for seasonal interest and color, including redbud (*Cercis canadensis*), *Hydrangea aspera*, Sargent crab apple (*Malus sargentii*), and witch hazel (*Hamamelis japonica*).

Several plants were donated to the Arboretum collections in spring 1989, including a 60-year old Japanese maple (*Acer palmatum* 'Dissectum') planted along the north side of the upper Woodland Garden Pond, a 14-foot camellia which was added to the plant beds along Azalea Way near the Lynn Street path, and a peony (*Paeonia coriacea*) added to the collection bed near Arboretum Drive.

Azalea Way

The development of the new grass has continued well through the spring. After fixing problems with the irrigation heads and reseeding some damaged areas, the reopening took place in late May. It is a great relief to have the fence removed and to regain access to this treasured part of the Arboretum.

Sorbus Collection

Major renovation efforts for the Brian O. Mulligan Sorbus Collection continue. During the rest of the summer we will remove and transplant trees and shrubs, do soil and drainage work, construct a grass path, and develop planting beds. New plantings should begin early this fall.

Christina Pfeiffer is the horticulturist for the Washington Park Arboretum.

Pioneering Seattle's Historical Trees

by Jerry Clark and Arthur Lee Jacobson

This is the year to commemorate historic Washington State events, but most of the history of Seattle's special trees awaits further study.

Since this is our state centennial year, it is easy to find articles about events that occurred in 1889 or hear about various historical activities. Easy, that is, unless you are interested in the specific date a tree was planted to commemorate a special event.

We set out to find historic tree plantings in and around Seattle, dating from 1889, and soon learned that at that time trees were being logged left and right. However, in the early 1900s, a group of volunteer women planted 3,000 trees downtown to replace those lost in the fire of 1889. All have since been cut down. Could this have been the first example of a volunteer street tree program?

Historic Trees

Historic tree records focus on: (1) specimen or noteworthy trees that are unique; (2) the largest examples of a tree species; (3) trees of striking appearance; and (4) trees standing as living landmarks or memorials. We list some examples below.

A Noteworthy Tree: The Washington Elm

The Washington Park Arboretum can boast one of the only authentic specimens started from the famous Washington Elm of Cambridge, Massachusetts. Under the Washington Elm, General George Washington took command of the Revolutionary Army on July 3, 1775.

Additional trees were started from the Arboretum's elm. According to the December 1936 *Arboretum Bulletin*, one was sent to Cambridge to be planted near the site of the original tree. Another one was planted on the capitol grounds in Washington, D.C., and a third was planted on the capitol grounds in Olympia, Washington. There also is a specimen between the Communications Building and Clark Hall on the University of Washington campus.

The Arboretum's Washington elm stands 100 yards south of the Graham Visitors Center, west of Arboretum Drive, north of the Woodland Garden. It is close to the road and is designated by a sign.

Also of note are two hollies planted near the University of Washington's Art Building which came from seed taken from Mt. Vernon, Washington's plantation.

The State's Largest Specimen: An Enormous White Poplar

The largest Bolleana white poplar (*Populus alba*) in the state is in the Arboretum on the south side of the Lynn Street Bridge. It towers 102 feet in height, is 75 feet wide, and its trunk measures over 18½ feet around. It is unknown whether it was planted as part of the original Olmsted 1905 boulevard design or early in the 1920s by the Seattle Parks Department.

An Excellent Specimen: *Liriodendron tulipifera*

The tulip poplars (*Liriodendron tulipifera*) along the twenty-one-hundred block of N.E. Park Road were planted as part of a University of Washington architecture class project in the 1930s. Of the remaining trees, one in particular is the most handsome, large-sized tulip tree in Seattle.

Trees of Striking Appearance

Trees That Line Olmsted Boulevards

Certainly, the earliest and best example of trees being used to line boulevards is along Lake Washington Boulevard. In this and other roadside plantings in Seattle, the Olmsted Brothers (landscape architects) laid out a rich variety of large-growing shade trees, including:

green ash (*Fraxinus pennsylvanica*), European beech (*Fagus sylvatica*), yellow birch (*Betula alleghaniensis*), European hornbeam (*Carpinus betulus*), horse chestnut (*Aesculus hippocastanum*), big-leaf linden (*Tilia platyphyllos*), little-leaf linden (*Tilia cordata*), Norway maple (*Acer platanoides*), sycamore maple (*Acer pseudoplatanus*), English oak (*Quercus robur*), pin oak (*Quercus palustris*), red oak (*Quercus rubra*), Turkey oak (*Quercus cerris*), hybrid plane or sycamore (*Platanus* x *acerifolia*), Oriental plane (*Platanus orientalis*), and poplar (*Populus nigra* cultivars and hybrids).

Some of these trees, though less than 100 years old, now tower more than 100 feet in height, making noble, leafy colonnades.

A representative boulevard planting of hybrid planes and English oaks line the south entrance of the Arboretum to remind us how trees are used to soften the harsh effects of urban design.

Living Landmarks

An Oak in Chehalis

Around 1860, another Washington State tree was made historic by the actions of a soldier in the Grand Mound area near Chehalis. As the story goes, this expert army marksman laid his old flint lock rifle in the crotch of a living oak tree to signify to the Chehalis Indians that hostility between the Indians and settlers had ceased. Today the tree still stands with the 1839 vintage rifle encased in the trunk.

Lombardy Poplars from the 1909 Exposition

The Lombardy poplars (*Populus nigra* 'Italica') in front of Architecture Hall at the University of Washington are another example of a living landmark. They were planted as a part of the Alaska-Yukon-Pacific Exposition held in 1909.

A World War I Memorial

The 1200 American elm trees planted in 1919 along Des Moines Way (south of Seattle) to commemorate Americans killed in World War I provide a good example of a living memorial.

More on Seattle's Favorite Turn-of-the-Century Trees

Trees that were popular in Seattle around the turn of the century are reviewed in a master's thesis, written in 1909 by a University of Washington student, Clarence R. Pope. From that thesis, entitled *Shade Trees of Seattle*, we have been able to generalize that the most common tree throughout Seattle was the maple. Several different species, including the big-leaf maple (*Acer macrophyllum*), Norway maple (*Acer platanoides*), and sugar maple (*Acer saccharum*) were used. The big-leaf maple comprised over 90% of all the maples planted in the city.

Mountain ash (*Sorbus aucuparia*) was the next most prominent tree planted after maples. Other trees found lining Seattle streets at that time included the American elm (*Ulmus americana*), English elm (*Ulmus procera*), catalpa (*Catalpa speciosa*), our native dogwood (*Cornus nuttallii*), horse chestnut (*Aesculus hippocastanum*), American linden (*Tilia americana*), black locust (*Robinia pseudoacacia*), honey locust (*Gleditsia triacanthos*), ginkgo (*Ginkgo biloba*), American sycamore (*Platanus occidentalis*), tulip tree (*Liriodendron tulipifera*), green ash (*Fraxinus pennsylvanica*), birches, poplars, and cottonwoods.

The American and English elms and green ashes planted on 34th, 36th, and 37th Avenue East between East Madison and East Mercer streets were planted by realtor John L. Scott to lure prospective home owners to buy his lots and build residential homes. This is one of the earliest examples we know of in Seattle where street trees were used to landscape a subdivision.

American elm planted in 1908 by the Benton family at 5727-29th N.E., Seattle. Photo by R. Bruce Eckley.

We have a good idea about the popular species of trees that Seattle had around the time of statehood, but Seattle lacks documentation on its specific significant tree plantings.

Keeping Records of Your Historic Trees

Individuals can identify trees of historical interest. For example, Arthur Lee Jacobson received a letter from Mrs. Louise Benton Oliver in early February of 1989 regarding an American elm important to her family's history:

> In 1909, my grandmother from Vermont sent to my father some little elm seedlings (probably 12 of them) in a shoe box. He planted them in his garden where they grew for several years. As they grew larger, he gave some of them to various relatives and friends. Half of them he gave to his brother who planted two or three on 22nd Avenue N.E., and two or three in the garden at the University Unitarian Church. They are all growing well and are all large trees.

According to Mrs. Oliver, there also are trees that grew from her grandmother's seedlings in the parking strip at 5558, 5559, 5700, 5727, and 6002 - 29th Avenue N.E.; the largest of these is the one at 5727 - 29th N.E. and Mrs. Oliver writes:

> Five or six years ago it split and about one third was destroyed, but tree surgeons did excellent repair work. The tree now is doing well and beginning to look quite symmetrical.
>
> The tree at 5700 - 29th Ave. N.E. is now having children (seedlings of its own about a year old).
>
> I have lived at 5700 - 29th N.E. and 5727 -29th N.E. since 1908 (81 years) so this is the reason these trees mean so much to me and how I happen to know where they are.

Looking back, it is sad how little historic documentation we have of our earlier tree plantings. There probably are rich and varied anecdotes about each tree, so a lesson is learned that good records

must be kept. Record as much information as you can about where that seed or seedling came from, why it was planted, how it has performed, what type and frequency of maintenance has occurred. And maybe—just maybe—future generations will be able to look back and better appreciate all the significant tree plantings that are happening today.

Arthur and I guarantee a warm reception if you care to join us by volunteering further historical information or donating time to research old tree plantings throughout Seattle.

Jerry Clark is the City of Seattle Engineering Department arborist, Room 704, 600 - 4th Ave., Seattle, WA 98104 (206) 684-5042.

Arthur Lee Jacobson is the author of the forthcoming *Trees of Seattle* and has written several articles for the *Arboretum Bulletin*. Contact him at 2215 E. Howe, Seattle, WA 98112 (206) 323-0179.

In Search of the Oldest Tree

by Ulrike Hilborn

Having been given the task of finding the oldest living specimen in the Arboretum, it immediately became obvious that the search had to be limited to the era of documented accessions which began on October 12, 1936. The red, hand-written ledger books, the first issues of the *Arboretum Bulletin*, and the grand circular file were to be my sources of discovery and frustration.

The entries on the first few pages of the ledger were all marked "dead." The *Bulletin* yielded the first hopeful lead on a train carload of rhododendrons, Ghent azaleas, and kalmias, which were ready to be shipped from the C.O. Dexter estate in Sandwich, Massachusetts. The March 1938 *Bulletin* appealed to Arboretum members for the freight costs of $524, a sum the Foundation did not have.

The April *Bulletin* celebrated the safe arrival of the cargo, and 1989 records showed the *Azalea schlippenbachii* still in place at the south end of Azalea Way, as well as several *A.* 'Ruby' and 'Mars' near the Graham Visitors Center. Combing the hillside above Azalea Way for labels or lichen-covered azaleas to identify the *schlippenbachii*, I fell into several holes cunningly concealed by a kneedeep carpet of Herb Robert. No *schlippenbachii* were discovered—they had bloomed off and their labels did not reveal themselves.

'Ruby' and 'Mars', on the other hand, could be pointed out from the windows of the Visitors Center. In early May, they were in full bloom underneath a large magnolia at the very north end of Azalea Way—fifty-one-year-old beauties.

But further searching discovered they were not quite the oldest living accessions. Of the many thousand seeds that had come to the Arboretum and had been duly recorded since October 12, 1936, few germinated and even fewer plants survive. A long, sad list of "dead" entries characterizes the pages of the red-bound 1936 ledger.

However, a chance remark about old oaks by naturalist Jan Pirzio-Biroli sent me off to the oak section between the north end of Azalea Way and Lake Washington Boulevard. There I found myself among the Arboretum's veterans and wandered from tree to tree checking labels. In 1938, two lovely basket oaks (*Quercus michauxii*) had arrived. In 1937, *Q. variabilis*, *Q. imbricaria*, *Q. dentata*, and *Q. glandulifera* were new to the Arboretum.

Finally, I was rewarded. Accession number 229-36 (the 229*th* accession of 1936) stretched its graceful limbs to the sky. *Quercus ludoviciana*, a tall and slender St. Landry oak, had been sent as an acorn, along with 49 others of its kind, by a Mr. Wirt from Oklahoma. It had been registered as *Q. subfalcata* on 12 November 1936 in the red ledger. But in the giant circular file, where the Arboretum's plant history is recorded as well as it can be, some past and unknown hand had decided that *Q. subfalcata* was really *Q. ludoviciana*, a hybrid of *Q. phellos* x *Q. falcata*. Three more were planted out on January 1948. One specimen is left, and as well as can be determined, it is one of the oldest recorded trees in the Arboretum.

Ulrike Hilborn is a newcomer to Seattle and volunteer at the Washington Park Arboretum.

Leaf of *Quercus ludoviciana*

Brian Mulligan's Legacy of Vines

by Jan Pirzio-Biroli

An English plantsman put in most of the creeping vines that you see wrapped around tree trunks in the Washington Park Arboretum and tangled among the leaves of the canopies. This fond story of vine-planter Brian Mulligan is part one of a four-part series on over forty years of contributions by the director emeritus.

One June day around 1982 I stood next to Director Emeritus Brian Mulligan and Curator Joe Witt at the head of Rhododendron Glen. We faced the bank above the twin parking lots and what appeared to be a wall of white roses—*Rosa brunonii*, the Himalayan musk rose climbing on a group of tall conifers.

Joe remarked, "Brian, that rose has reached the third tree by now," to which Brian replied with obvious satisfaction, "Yes." He had collected its seed in the University of California Botanical Garden at Berkeley in December 1946—the first year he worked in the Washington Park Arboretum. Within 10 years he had planted out three specimens.

Brian, true to his British training, has been planting roses and other vines in the Arboretum ever since he became director in 1947. Perhaps the flowers most often noticed in June are those of the aforementioned *Rosa brunonii* and a glorious specimen of its supposed cultivar 'La Mortola', which fills the southeast corner of the area around the Visitors Center parking lot, climbing into an adjacent cypress, *Cupressus goveniana*. Both of these roses bear white, five-petalled flowers about two inches wide, although those of 'La Mortola' may reach 2-½ inches. They bloom in many-flowered panicles in June or early July.

Over the years, the Arboretum's lath houses were used as trellises for vines. Before construction of the new Visitors Center forced demolition of the northern lath houses, their sloping roofs supported a summer mosaic of color from *Clematis* cultivars with exotic names such as 'Edith Cavell', 'Fair Rosamund', 'Marie Boisselot', 'Huldine', and 'Lasurstern'. Their saucer-shaped flowers in shades of white, blue, and rose contrasted with the salmon-red flowers of the trumpet vine, *Campsis* x *tagliabuana* 'Mme. Galen'.

Until about two years ago, when the crumbling structures could no longer support their weight, the south lath houses boasted an array of climbers whose flowers might be less spectacular, but whose value resided in other features. *Celastrus* species (bittersweet), and the tendril-climbing *Ampelopsis aconitifolia* littered the ground with orange berries. Kiwi fruit was regularly produced on *Actinidia chinensis*, one of several species of that genus that were planted there. Clusters of black fruits appeared in autumn to complement two decorative grape vines, the crimson-leaved *Vitis vinifera* 'Purpurea' and its relative, *V. coignetiae*, whose nearly round, 10-inch puckered leaves turn glorious shades of gold through scarlet and plum. Although they were cut to the ground, these plants have been allowed to persist and grow to provide propagating material for future plantings.

Throughout the Arboretum, vines and climbing shrubs have been used to lend another dimension to the plantings. Roses, pyracanthas, and wisterias grow on the fence separating the Arboretum from Broadmoor, our neighbor to the east.

A few examples will illustrate the array of species that decorate native cedars and Douglas-firs. In

Glossary

Sepal is the enlarged flower part(s) of lace-cap hydrangeas and their relatives.

Inflorescence is a cluster of flowers.

Monoecious ("one house") means having male and female flowers on the same plant.

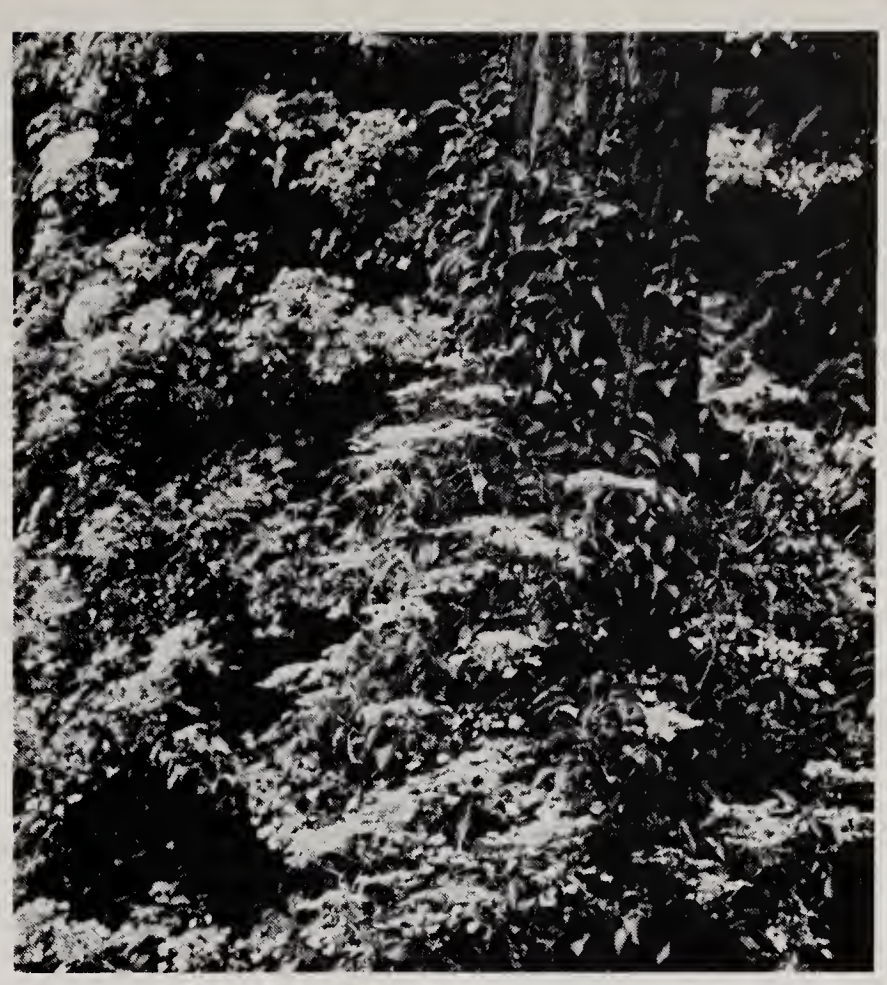
Panicle refers to a compound inflorescence.

Loderi Valley, a handsome specimen of *Akebia trifoliata*, the three-leaved *Akebia*, climbs to the top of a tall cedar. Since these monoecious species rarely produce fruit without hand-pollination, for many years Brian achieved the desired result with pollen from his *A. quinata* or vice versa. The fruit resembles, before it opens, a plump lavender banana. It is supposed to be partially edible but it is rather bland.

A most interesting and attractive contrast is a pair of vines in the Camellia Section facing west and somewhat off the beaten track unless one knows where to look for them. They climb adjacent Douglas-firs by aerial rootlets. *Hydrangea petiolaris* (synonym *H. anomala* ssp. *petiolaris*) covers itself in early summer with white "lace-cap" inflorescences whose four-sepaled sterile flowers lend accents to the foamy appearance during its period of bloom. A week or two later, *Schizophragma hydrangeoides* repeats the effect with the difference that its sterile flowers bear one sepal only. Since the inflorescences remain intact while they mature, the plants remain decorative throughout the summer.

In 1988, Brian told me with considerable gratification that the hydrangea had nearly reached the top of the tree. In the meantime, in order to exhibit the species more clearly to the public, another specimen has been planted in its vicinity facing Arboretum Drive.

At the northeast head of Rhododendron Glen, a handsome variegated species, *Actinidia polygama*, grows on a towering cedar facing southeast. In the bright light of late morning and early afternoon, the white patches on its leaves lend sparkle to a plant that seems to flow down the tree like a waterfall. This is a male specimen whose mate grows several hundred feet north, too far to achieve pollination without help.



(Opposite page) Flowering branches of Rosa brunonii *'La Mortola' photographed by Brian Mulligan, June 11, 1979. Above,* Hydrangea petiolaris, *photographed by R. Bruce Eckley.*

In 1985, we observed in Loderi Valley a beautiful evergreen vine, *Hydrangea integrifolia*, whose rootlets hold it to the bark of a Douglas-fir, climbing almost 20 feet into the tree. It was planted in 1975, three years after Brian's retirement as director of the Arboretum. He greeted it with delight in the thought that Joe Witt had planted it to continue the tradition Brian began more than 40 years ago.

Jan Pirzio-Biroli is a naturalist at the Washington Park Arboretum who has known Brian Mulligan for over 25 years. Jan has a master's degree in botany (taxonomy) and is a former editor of the *Arboretum Bulletin*.

MICHEAL MOSHIER LANDSCAPING

DESIGN AND INSTALLATION OF NEW GARDENS

RENOVATION OF EXISTING GARDENS

3902 EAST McGILVRA
SEATTLE, WA 98112

322-1318

STATE CONT. REG. NO. MICHELML159PB

FINE ANTIQUE
BOTANICAL
PRINTS

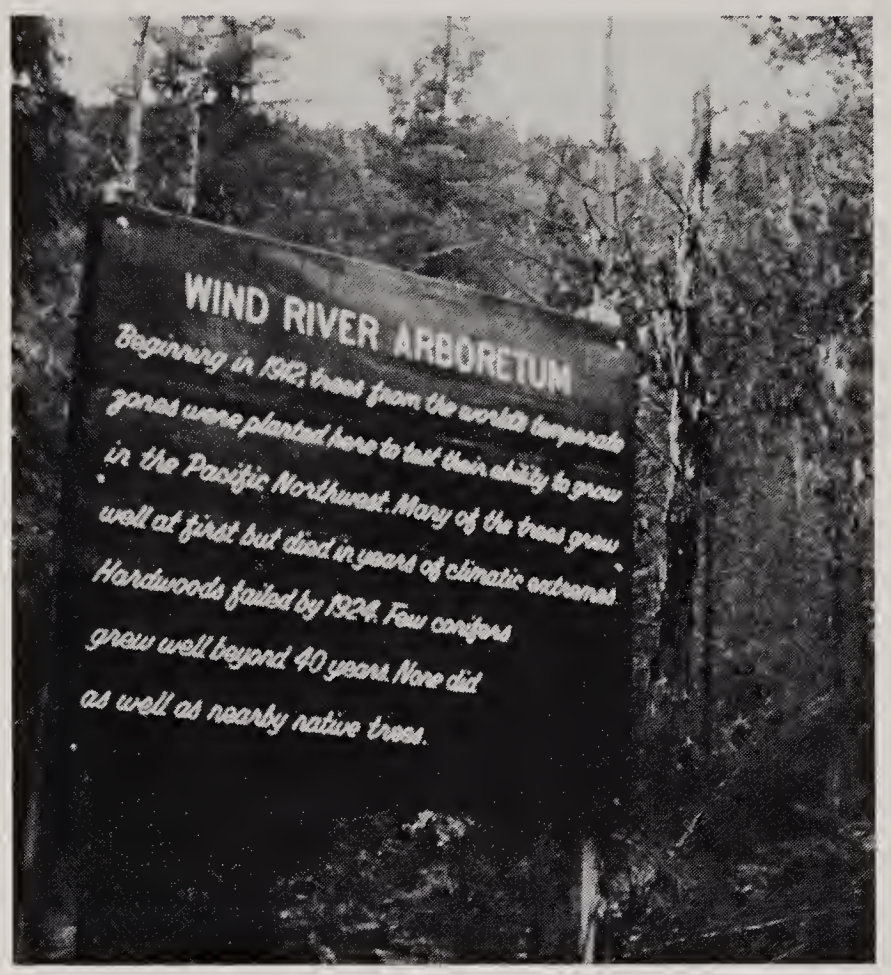
Carolyn Staley · *Fine Prints*

313 First Avenue South Seattle, Washington 98104 [206] 621-1888

The Northwest Garden Explorer

Scot Medbury

The Northwest's oldest arboretum is 4.5-hour drive from Seattle.



Tucked away in the tiny Wind River Valley in the southern Washington Cascades is the Wind River Arboretum, an 11-acre public arboretum that is the Northwest's oldest. It was started in 1912 by the United States Forest Service and today contains a rich collection of mature conifers, many with interesting growth histories. Wind River's rustic setting, fine tree collection, and excellent interpretive signage combine to make it a place well worth visiting.

The birth of forestry research in the Northwest took place in 1909 at Wind River with the establishment of an experiment station and nursery. The arboretum was started a few years later to develop suitable trees for use in reforestation projects west of the Cascades. The foresters at Wind River were looking for a silvicultural "wonder tree": a species that could outgrow native trees, was free from pest and disease problems, and produced quality lumber. In short, they sought a hardy, exotic tree similar to the Monterey pine, *Pinus radiata*, a species widely grown today in Chile, New Zealand, and Australia. In all, over 250 different taxa of mostly exotic conifers were tried at Wind River, planted out in blocks where they were left to grow under forest conditions.

The foresters at Wind River discovered that native Northwest trees performed best (Douglas-fir especially), both in terms of growth and vigor. Moreover, native trees grown from seed collected locally fared better than trees of the same species whose seed had been collected far away. This early observation has helped to shape reforestation efforts in the Northwest ever since, and today the managed forests in Western Washington and Oregon contain mostly trees grown from seed of local provenance.

The visitor to the Wind River Arboretum will not find a manicured, park-like landscape. Wind River is a research arboretum, its geometric plots of trees possessing their own peculiar beauty. Maintenance is minimal, and corrective pruning is nonexistent. While some trees thrive at Wind River, most have suffered under stresses of one kind or another. Occasional sub-zero winters or late spring frosts have injured many trees, and the heavy wet snows common to the Wind River valley are responsible for numerous broken-out tree tops and snapped branches. Dry summers have water-stressed many species, especially those from parts of the world that receive summer rainfall. To make matters worse, damage from pests and diseases has been widespread. Yet, trees weakened in these various ways remain, and their problems are explained to visitors on the Arboretum's many interpretive signs.

Red-bellied sapsuckers have been a special nuisance at Wind River. When I was there in December 1988, I watched sapsuckers busily girdling different species of *Pinus*, pecking tiny holes into the cambium to get at the sap. Other significant sources of injury have been white pine blister rust, needle blights, and adelges gall on spruce.

Nonetheless, some trees at Wind River are flourishing in the face of such adversity. A group of sequoia redwoods, *Sequoiadendron giganteum*, a familiar tree in the Washington Park Arboretum, has attained an average of 110 feet in height and is in excellent health. Incense cedars, *Calocedrus decurrens*, are performing equally well. The genus of true firs, *Abies* spp., is well represented with 24 species, of which 11 are doing well. Larches (*Larix* spp.) and spruces (*Picea* spp.) are other collection strengths. The Wind River Arboretum once boasted one of the world's largest spruce collections; out of 20 species, 16 are thriving today. Among these is perhaps the most handsome conifer of all, the Brewer spruce, *Picea breweriana*, native to the Siskyou Mountains of southern Oregon. Specimens at Wind River are now over 65-years old and are

beginning to exhibit the tree's most striking characteristic—the long grey-green branchlets that weep downward from the outwardly sweeping branches.

Some trees at Wind River have grown extremely slowly. This includes trees that have been frozen back to the ground several times. The coast redwood, *Sequoia sempervirens*, is now recovering from such winter injury, but will likely be knocked back again one day. Most curious of all the slow-growing species at Wind River are a pair of monkey puzzle trees, *Araucaria araucana*, planted at the entrance to the Arboretum. These two trees have grown only 11 feet in height after 77 years, an average of only 1.7 inches a year!

The Wind River Arboretum now focuses on conifers, largely because initial plantings of broad-leaved trees grew poorly—with one notable exception. The northern limit in the Cascades of the golden chinquapin, *Chrysolepis chrysophylla*, is just a few miles from the Wind River Arboretum, and this tree forms one of Wind River's greatest success stories.

This beautiful oak-relative, with a reputation of being slow growing and somewhat difficult to establish in cultivation, has outdone itself at Wind River. The original 1913 plantings average 55 feet in height, and young chinquapins have sprouted like weeds all over the arboretum.

Besides the cultivated plants at Wind River, a number of interesting natives are found. Beneath the chinquapins is a thick mat of pipsissewa, *Chimaphila umbellata*, a delightful evergreen groundcover in the heath family. Other native groundcovers that abound in the arboretum include twinflower, *Linnaea borealis*, and the rattlesnake plantain, *Goodyera oblongifolia*, really a species of orchid.

The Wind River Arboretum is about four-and-a-half hours from Seattle, or an hour-and-a-half up the Columbia River from Portland. It is located ten miles north of Carson, Washington, on Hemlock Road. Excellent signage makes it easy to find. The Arboretum is open anytime during daylight hours, but the adjacent U.S. Forest Service's Wind River nursery can be visited on weekdays only. Check in at the office for more information.

Scot Medbury is a graduate student at the Center for Urban Horticulture and coordinator of public classes for CUH. His column on public gardens of importance to members of the Washington Park Arboretum is an ongoing feature of the *Bulletin*.

A number of horticultural stops and sights can be enjoyed on the way to Wind River:

A visit to the Olmsted-designed sunken garden at the State Capitol in Olympia is always a delight, and is especially appropriate in our state's centennial year. The small conservatory there displays a variety of well-grown container plants. Another Olympia-area horticultural landmark is Tumwater Falls Park, which displays rhododendrons and conifers atop picturesque Tumwater Falls of beer-label fame.

Centralia's Fort Borst Arboretum, in Fort Borst Park just southwest of I-5 exit 82, makes an excellent rest stop when driving south.

The Hulda Klager Lilac Garden, a National Historic Site, lies just a short, well-signposted distance from the freeway, in the quiet town of Woodland. A mature garden containing hybrid lilacs and other woody plants, the Klager garden has the sort of rambling charm that characterizes many midwestern gardens.

More Reading

See an in-depth description of Wind River by former director Thornton T. Munger in volume XI, Number 3 (fall 1948) of the *Washington Park Arboretum Bulletin*. Occasional papers are available in the vertical files at the Miller Library.

A rustic shelter covers the 10-foot section of the largest recorded Douglas-fir which grew at Mineral, Washington, until 1927 when windthrown. (Opposite page) A self-guided interpretive trail starts to the left of the sign.

The Olmsted Designs for the Washington Park Arboretum

by Catherine Joy Johnson

The Olmsted Heritage

Frederick Law Olmsted, Sr., and his architect partner Calvert Vaux (Olmsted, Vaux & Company) founded the profession of landscape architecture. Beginning in 1857, they designed the nation's first large city park and first scientifically arranged arboretum. Washington Park Arboretum is part of that heritage.

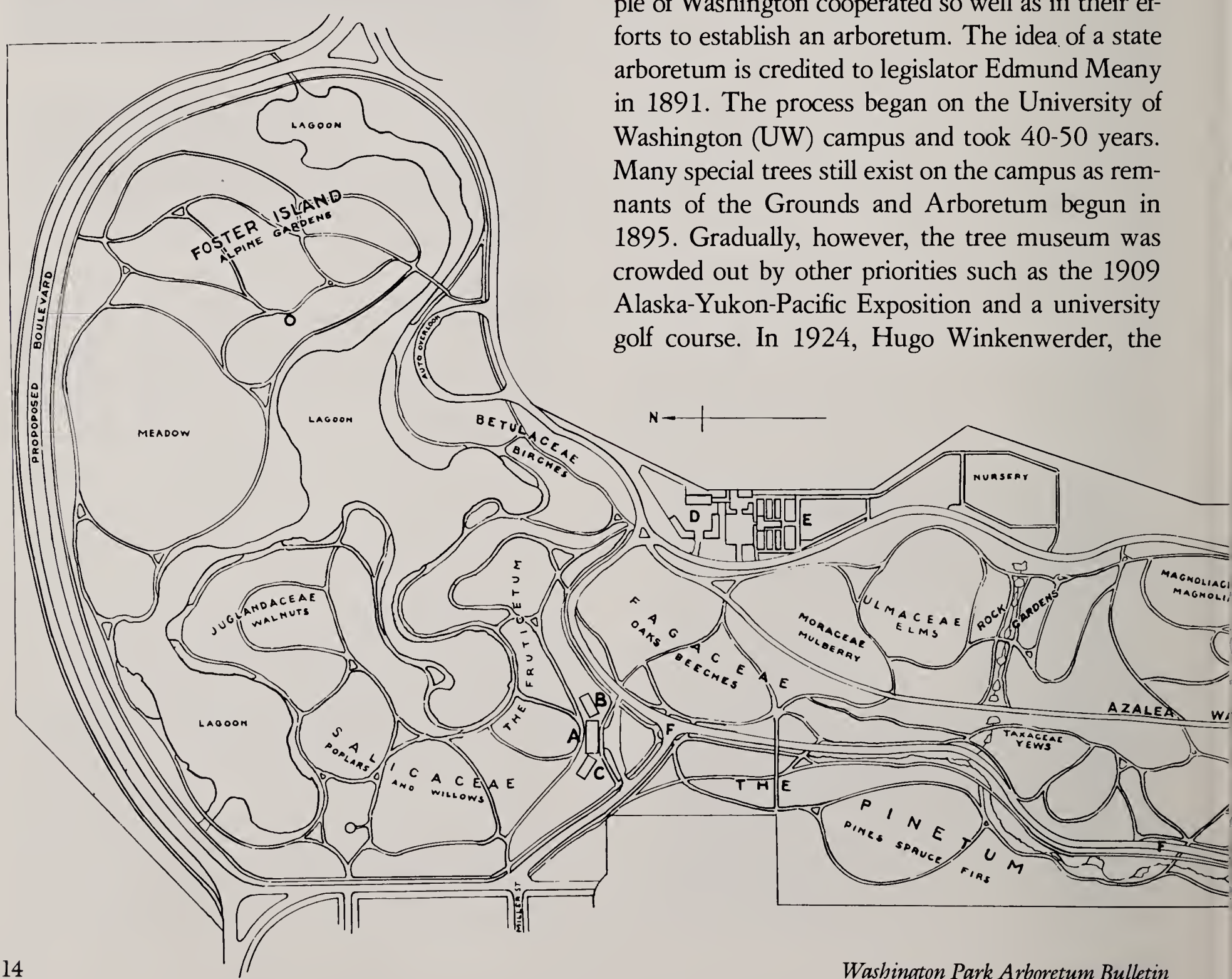
Olmsted, Sr., his sons, and partners (1857-1950) progressed through seven successive firms and designed an estimated 140,000 plans for parks, boulevards, playgrounds, arboreta, campuses, residential estates, and the grounds of institutions in America. They believed in the ability of the natural environment and of designed landscape spaces to have a positive influence on people. They helped to lay the groundwork for the U.S. National Park system and did regional planning. Olmsted, Sr., a publisher before he became a landscape architect, wrote much against slavery and other social ills. He wanted his parks to be for everyone.

Partly because of recent interest in the environment, and in preservation and restoration, the Olmsted professional records and correspondence are currently the most researched collection in the Manuscript Division of the Library of Congress.

With the exception of an 1873 city plan for Tacoma by Olmsted, Sr., all Olmsted-designed landscapes in the state of Washington (over 200) are by John Charles Olmsted and James Frederick Dawson of Olmsted Brothers, Landscape Architects (1898-1950). Olmsted Brothers was the partnership of John C. Olmsted and his younger half brother, Frederick Law Olmsted, Jr. After John Olmsted died in 1920, Dawson became a partner in the firm.

The History

Rarely in the State's first 100 years, have the people of Washington cooperated so well as in their efforts to establish an arboretum. The idea of a state arboretum is credited to legislator Edmund Meany in 1891. The process began on the University of Washington (UW) campus and took 40-50 years. Many special trees still exist on the campus as remnants of the Grounds and Arboretum begun in 1895. Gradually, however, the tree museum was crowded out by other priorities such as the 1909 Alaska-Yukon-Pacific Exposition and a university golf course. In 1924, Hugo Winkenwerder, the



dean of the UW College of Forestry, received city permission to move the arboretum site to Washington Park, one mile south of the university. Due to legalities and lack of funding, it took until 1934.

Much has been written about Washington Park Arboretum's early history, but these accounts reveal little about the designers—Olmsted Brothers, Landscape Architects—their design intent, and how well that was carried out.

Part I: Washington Park

The Olmsted advice and designs for the Washington Park Arboretum are more extensive than once thought by historians because they begin first with the formation of Washington Park (1903) and continue through to the development of Washington Park Arboretum in that space (1934-41). Both phases are listed under the Olmsted archival number 2699, which lists 88 plans completed.

As senior partner of Olmsted Brothers, John C. Olmsted accepted a 1902 proposal of the Seattle Board of Park Commissioners to design a park and boulevard system for Seattle. He began his first segment in a partially logged 81-acre tract called Washington Park and was assisted by James F. Dawson, an Olmsted associate. Olmsted advised that east, west, and north boundaries be enlarged and he wrote, "Foster Island and all rights to the land under the water should be secured." (Olmsted Brothers was being paid a basic fee plus $14 per acre.) When the president of the Park Board, an architect named Charles Saunders, asked John Olmsted to limit his concern to the "driveway"—the 7,550 foot Washington Park Boulevard—Olmsted responded, "You know it would be unreasonable for the city to ask you to prepare a design and working drawings for a portion of about . . . 30 or 40 feet square of a proposed city hall . . ." He continued, "We trust, therefore, that your Board will soon arrange with us for completing plans for the whole of Washington Park."

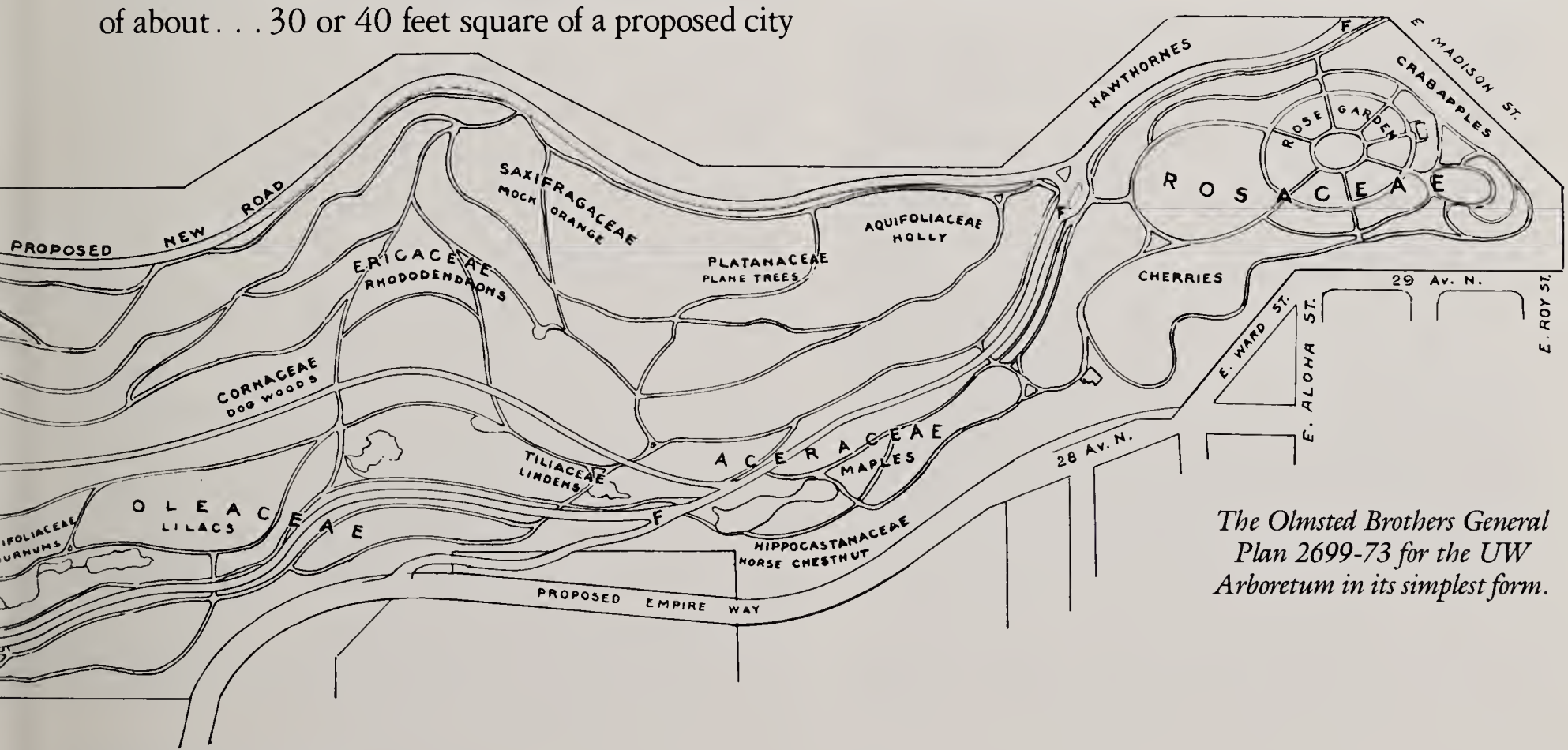
Point made. The city gradually acquired adjacent properties to the 81-acre tract and the park grew to 127.99 acres by 1904; 163.32 by 1910; 174.48 by 1922; and 197.05 by 1930.

John Olmsted's Design

The Olmsted design finds its roots in the English naturalistic style of the late eighteenth century. Ideally, each Olmsted park is to be a piece of landscape art where all parts are confluent and contribute to the whole. The designs are curvilinear with sinuous paths and trails, and undulating topography.

John Olmsted considered each portion of the park and its relationship to other portions, carefully planning the boulevard "in a graceful curve along the natural contours of the land," while preserving ravines and high places, "notable trees," and undergrowth. He specified "areas to be cleared," some of which would be needed for crowds. In asking for Foster Island he was pushing the park's border to Lake Washington. By enlarging the western boundary, he saved the small stream which flows to Union Bay, and provided space for screening near the edge of the park. His plan to place hundreds of trees and shrubs, such as 1,140 native dogwoods along the boundary, was not followed.

The distinctive port of entry from Madison Street to the first driveway was planted in fall 1906 as a model for later Olmsted boulevards in the rest of the city. The "Planting Plan for the Border of Driveway" specified 17 eastern red oaks (*Quercus rubra*), three Oriental plane trees (*Platanus orientalis*), three cucumber trees (*Magnolia acuminata*),



The Olmsted Brothers General Plan 2699-73 for the UW Arboretum in its simplest form.

Hundreds of such stumps were removed by WPA workmen to prepare the ground at the Arboretum. (WPA photo, UW Archives).

a European beech (*Fagus sylvatica*), and informal groups of Northwest native trees and shrubs. The scheme included the full length of the boulevard, but only the first portion was implemented. Some of the original planting exists today.

As Washington Park became more desirable, various interest groups wanted to fill the empty spaces. Horse enthusiasts made trails and a $9,000 carriage speedway on a former logging trail (now Azalea Way). In 1907, a ball field, allowed by John Olmsted, claimed 10 acres in the southwest corner and is there today. The park's northwest corner is now occupied by the Museum of History and Industry.

Part II: From Park to Arboretum

The Olmsted Brothers prepared at least 21 designs for Washington Park, making possible the setting that 30 years later was ideally suited for the Arboretum. Fortunately, Dawson was selected in 1934 to design the University of Washington Arboretum and thus was able to carry through earlier Olmsted concepts for the site.

During the depression, funds became available for Washington State if suitable projects could be found for the unemployed. Citizens and state officials made an ideal match: Some of the funds would build the new Arboretum! Help from the Washington Emergency Relief Administration began in 1933. The Works Progress Administration (WPA) provided at least 1.5 million dollars between 1935 and 1941.

By 1934, James F. (Fred) Dawson was 60 years old and he had designed his way across America. His clients included many notable citizens, such as John D. Rockefeller (Ft. Tryon Park, New York), and Mrs. Arthur J. (Sophie) Krauss (private residential gardens, Seattle, Washington). His practice ranged from public institutions (Alabama and Washington State capitol grounds) to arboreta (Morris Arboretum, Philadelphia, and others). The Olmsted firm which he represented had prepared plans for the Arnold Arboretum, the country's most prestigious arboretum, and had continued to be active in arboretum design.

Clearly, the committee mandated on September 6, 1934, to obtain landscape plans for the Arboretum would be firm in its choice: James F. Dawson of Olmsted Brothers. The Seattle Garden Club led the private sector and donated the $3,000 fee for a general plan. On March 2, 1935, Dawson had outlined the services that Olmsted Brothers would render: (1) The topographical study would be done by the client according to Dawson's specifications; (2) Dawson would design the general plan which would take about a year to prepare from his Massachusetts office; and (3) detailed construction plans and detailed planting plans would follow for "further remuneration," which might be as much as $15,000.

For his preliminary General Plan 2699-73, Dawson proposed a spectacular shore drive along a series of lagoons and around Foster Island. An intricate trail system would lead to inlets, bays, a Japanese garden, pergolas, and, finally, a large meadow for a vista of Union Bay. The total area of the Arboretum would be 267 acres and would encompass the ball field on its southwest corner where he would place a ten-acre rose garden in two interlocking circles.

Dawson was just nicely into the project when he was contacted by overseers in Seattle who were trying to coordinate as many as 700 WPA workers a day on the Arboretum grounds. Thus, Dawson and his draftsmen interrupted the general plan to provide 37 or more detailed plans for such projects as grading of land and roads, construction of greenhouses, and the placement of electrical and water systems.

The finished general plan showed the locations of open and planted areas, buildings including the lookout, small bridges, walks and drives, trails, the location of lagoons to be dredged, and the general arrangements of the Arboretum collection. Dawson, following the Olmsted concept of separation of traffic, indicated eleven locations for paths to drop below roadways. This was not done.

A Scheme for Plant Placement

Dawson placed 180 plant families, arranged in botanical sequence per the Engler and Prantl sys-

tem, starting at the north end of the Arboretum (Union Bay) south to Madison Street " . . . according to proper soil condition and harmonious relationship to the best aesthetic landscape composition." Much of his time was spent carefully and thoroughly considering this problem. He felt that strict adherence to a scientific arrangement could, at times, be unattractive and impractical.

Construction and planting were under acting director Hugo Winkenwerder and his assistant Frederick Leissler. Local landscape architects Otto Holmdahl and Noble Hoggson also did special assignments. Olmsted Brothers followed Plan 73 to prepare 15 additional designs, including those for Azalea Way (2699-84 through 88).

Azalea Way

The Olmsted Brothers proposed 24 trail miles for the Arboretum. The most popular of walks is Azalea Way which was designed to feature 12,000 azaleas enriched by an overstory of 700 cherry and 150 eastern dogwood trees. Azalea Way is reminiscent of spaces in other Olmsted parks. Each Olmsted landscape was to be distinct, maximizing its topographical characteristics and horticultural potential.

When Dawson looked at the three-quarter-mile speedway, he saw a showcase for azaleas that would thrive in a mild and moist climate. Dawson used the same concept that Frederick Law Olmsted, Sr., used in 1878 when he designed a lilac walk for the colder temperature at Arnold Arboretum in Boston. Both arboreta log their largest crowds when their respective displays are out, luring visitors into other important collections. At the Washington Park Arboretum, good choices are collections of maples, rhododendrons, and hollies.

The Seattle Garden Club underwrote the plans for Azalea Way. Other groups, such as the Tacoma Garden Club, the Lake Washington Garden Club, and the Washington State Federation of Garden Clubs sponsored special collections, as did donors around the world who were interested in seeing which trees and woody plants would flourish in the Northwest.

Planting for the "Special Display of Flowering Cherries and Azaleas" began in 1939 under a new Arboretum director, Dr. John Hanley.

Dawson specified 83 species and varieties of azaleas—both Asiatic and native American—and recommended another 65. He chose 18 varieties of cherries (*Prunus spp.*), including large groups of *P. subhirtella* and *P. serrulata*. Many of the cherries are nearing the end of their life spans and will be replaced.

In 1941, Sophie Krauss and James F. Dawson were in the midst of negotiations for his further guidance in Arboretum matters, but he died and thus the Olmsted plans for the Arboretum ended. WPA funds also terminated in 1941, and soon World War II began. The new director, John Hanley, and the Arboretum Foundation had a sparse budget, but did a magnificent job of implementing the plans through the war years. There were 1,000 Foundation members by 1940. Many of them were recruited by Mrs. J. Swift Baker (Elizabeth) to volunteer their time propagating and planting.

In 1947, the Olmsted Arboretum General Plan was updated by the director, Brian Mulligan, and a special committee. At that time, 19 plant families were moved. Other adjustments have been made throughout the years to take care of soil and lighting problems. The 1979 restudy of the Olmsted plan by the Seattle landscape architecture firm of Jones and Jones is being considered by the Arboretum Advisory Council in long-range planning of the Arboretum.

Thanks to the University of Washington Archives, Manuscript Division, and Special Collections; the Seattle Department of Parks and Recreation and the Municipal Library; the Manuscript Division, Library of Congress; and *The Long Road Travelled* by Henry Schmitz.

Catherine Joy (Katie Jo) Johnson is a vice chair of the National Association for Olmsted Parks, and a member of The Arboretum Foundation.

Kiosk at Interlaken and Washington Park Boulevard, after 1937. It was removed in the 1950s. (UW Archives).

Landscape Preservation and Restoration in the Pacific Northwest

by David C. Streatfield

Interest in landscape preservation is a recent phenomenon with important meaning for the Pacific Northwest.

The concepts of *preservation* and *restoration* imply a positive attitude toward the past. They acknowledge that acts of the past still have meaning, and will have meaning in the future. Preservation is thus the complete antithesis of Henry Ford's idea that "History is bunk," and affirms that the experience of most people is one of being surrounded by the fragments of the past. How much of these remnants should be preserved and in what ways, are the principal problems that preservation seeks to address.

In the United States, interest in the preservation and conservation of historic landscapes is a relatively recent, still largely unknown, and little understood phenomenon. The protection of large tracts of wild land as national parks at the end of the nineteenth century was the first program of its kind in the world.

However, despite the passage of the Antiquities Act of 1909, which protected critical archaeological sites, it was not until the 1920s that a number of important gardens were restored. The most significant historic landscape restoration of that decade was the town of Williamsburg. But these were all isolated and unrelated events. The National Preservation Act of 1966 attempted to integrate preservation activities nationally. It listed historic sites on the National Register of Historic Places and established standards for the restoration of historic buildings and sites. In turn, several local preservation controls began, of which the Landmarks Preservation Ordinance of Seattle is a notable example that is recognized nationally.

Most of this national and local legislation has been concerned with the protection of buildings and structures. There is, however, growing realization that the protection and conservation of landscapes is of equal importance, and each has a peculiar set of problems. The most significant difference between a historic landscape and a historic structure is that a landscape is dynamic—indeed is in a constant process of change—whereas a structure is static.

What to Preserve

It would be impossible, and almost certainly undesirable, to preserve every historic landscape or physical structure. National and local legislation has established criteria for selecting sites associated with (1) critical historical or cultural figures or events; and/or (2) with famous designers; or (3) which typify particularly well their period of creation. Thus farms, battlefields, cemeteries, villages, boulevards, parks, parkways, playgrounds, and gardens have all been listed as meriting preservation. In addition to such individual landscapes, collective landscapes have also received the protection. Of Seattle's eight historical districts, the Harvard/Belmont Historic District on Capitol Hill and the Fort Lawton Historic District in Discovery Park have significant landscape values. Ebey's Landing National Historic Reserve on Whidbey Island is a 30,000-acre reserve that is a working agricultural landscape of great historic and cultural value. It provides an example of landscape conservation in which the original *use* of agriculture is being conserved, although the original production practices are no longer in use.

Philosophies of Preservation

Preservation embraces two different ways of protecting the artifacts of the past. In its purest form, preservation stabilizes the remains of the past at a particular time. Thus *restoration* changes landscape to a preferred period of the past. Compelling reasons must exist to do this. A landscape might be associated with a national figure or family, or be designed by a notable landscape designer. *Conservation* of a historic landscape stabilizes the landscape in its present form. Landscapes are often *palimpsests*, that is to say landscapes that have been created by many generations overlaying each other and retaining parts of their predecessors' work. Any preservation program must be undertaken with a clear understanding of the *intent* behind one of these two philosophical approaches.

The Historical Intent

A preservation program is usually initiated by compiling an accurate chronology of the development of a landscape. This is not an easy task. The historian consults primary documents such as maps, drawings of landscape designers, sale bills, inventories, letters, diaries, poems, and other personal materials and photographs. Photographs can be

very valuable, since by using photogrammetric analysis, it may be possible to develop spatial dimensions and thereby reconstruct completely a landscape plan.

One of the most exciting developments in landscape restoration and preservation has been the application of archaeological techniques to establish historic truth. In the excavation of the garden at Carter's Grove in Virginia, William Kelsey overturned several assumptions about the layout of and the plants grown in early eighteenth century Tidewater plantation gardens.

Secondary sources, such as tourist guides or nursery catalogs, also can provide valuable insights. Arranging this material in the correct historical sequence of landscape transformation leads to a determination of the original *intent* of the landscape. The historical record is invariably incomplete, and it is as important to distinguish clearly what is known, as it is to define what is not known, so that hypothetical inference can be differentiated from substantiated fact.

Problems Associated with the Restoration of Historic Landscapes

The restoration of historic landscapes is associated with a peculiar set of problems. The availability of historic plants is frequently a problem. Certain species may no longer be available in the regular nursery trade. In such cases, it is desirable to select plants which have similar characteristics of size, form, flowering color, and foliage texture. Furthermore, some plants grown in the past are now susceptible to serious diseases, such as Dutch elm disease and Chestnut Blight. Trees of similar appearance should be used in such circumstances.

Some gardens of the past, particularly those created in the second half of the nineteenth century, were planted with little understanding of, or concern for, the ultimate size of plants. An overgrown jungle-like profusion results. Rigorous adherence to the *intent* of such a garden would create serious problems of overcrowding, and clearly judgment has to be exercised in the management of such landscapes. When a major specimen tree has to be felled because of death or disease, replacement is desirable with a semi-mature specimen rather than a small sapling so that the correct spatial character can be maintained.

Maintenance practices in the past frequently differ from those used today. Lawn mowers were not employed prior to 1850. When restoring earlier gardens, blades on modern lawn mowers should be set to replicate the rougher textures that would result from scything. Irrigation practices have changed considerably since the late years of the nineteenth century. In old gardens the use of traditional hand-watering may be preferred to modern automated irrigation systems if this can be afforded.

Pest control is another subtle maintenance problem. In the eighteenth and nineteenth centuries

This photo (taken in the late 1930s or early 1940s) was referred to during the restoration of the former Arthur and Sophie Krauss garden, a 1929 design by James Dawson of the Olmsted Brothers. Mrs. Krauss was a force behind the development of the Arboretum. Photo by Depue, Morgan, & Co.

biological forms of control were used rather than petrochemical products. Strict authenticity can only be achieved by using traditional methods.

Paving and walls need to be replicated exactly using authentic materials and levels of craftsmanship. Modern materials and craftsmanship change the character of a landscape in subtle, but extremely important, ways which depart significantly from the original design intent.

Changing uses of historic landscapes can present particularly difficult restoration problems. It is desirable, wherever possible, to make few physical changes to the landscape so that the original intent can be maintained and also support new and appropriate uses. For example, the subdivision of large estates into small residential properties, and the conversion of historic schools and their sites to residential or commercial uses represent the creation of *new* landscapes in historic landscape contexts.

Landscape Preservation and Restoration in the Pacific Northwest

The Pacific Northwest region has experienced very little historic landscape preservation and restoration. This can be attributed to a number of factors. The general lack of awareness and value of historic landscapes is the most important, both nationally and locally. It is particularly acute in a region which has little sense of its short past, or of the value of preserving anything from that past. Many of the finest private gardens in this region are not well known, since they are rarely open to the public and cannot be seen from public roads. In the case of designed naturalistic gardens, their owners often have little sense of the extent to which their gardens are creations rather than works of nature.

There has been considerable resistance to the designation of private properties as landmarks in Seattle. Owners mistakenly believe that the value of their property will fall. They also believe, mistakenly, that landmark status will necessitate regular public access, and that it represents an unwarranted intrusion by government into private affairs. Indeed, for many garden owners, the transformation of an old garden into something completely new expresses the personality of its owner and is an important creative act.

The dominance of the preservation community by architects has had a predominantly negative effect on historic landscape preservation. Architects and architectural historians have given primacy to the preservation of structures at the expense of the landscape. This problem is even more acute in a region where there are few competent landscape historians and few landscape architects who have developed sufficient sensitivity to preservation issues to be entrusted with this task.

Finally, maintenance costs and changing maintenance practices have made landscape restoration unattractive to some owners of historic gardens. The planting beds at the R.D. Merrill House in Seattle, designed in 1909 by Charles Adams Platt, have been changed from places that were replanted several times a year into a geometric parterre of clipped box hedges and gravel. However, in this case, it would be possible to restore the garden to its original form. Changing social needs and rising property taxes have forced subdivisions of larger estates, often with unfortunate consequences for the landscapes. The former estates at Madera and Thornewood in Tacoma are glaring examples of very poor subdivision practice.

In the public realm, adopted policies can work against appropriate preservation management. The Seattle Parks Department's insistence upon applying the concept of a 'wilderness' park to every part of Discovery Park has resulted in unnecessary changes to the parade ground of the Fort Lawton Historic District.

However, despite these problems and the paucity of restored landscapes, the region can take pride in some successes. A number of important cultural and historic landscapes have been systematically documented. These include: Ebey's Landing National Historic Reserve, Whidbey Island; some of the hotel/resort gardens on Barnes Point in the Olympic National Park; Hollywood Farm at Woodinville; the Bloedel Reserve on Bainbridge Island; and many gardens in Seattle designed by the Olmsted Brothers of Brookline, Massachusetts.

There are very few examples of actual landscape restoration in the region. One is the small garden at English Camp, which is part of the National Park on San Juan Island. Several of the historic districts in Seattle are of great importance as historic and cultural landscapes. Long-range master tree-planting programs have been devised for the Queen Anne Boulevard and for the Harvard/Belmont Historic District. The intent of both of these plans has been to attempt to continue, as far as possible, the character of the existing or intended cultural landscapes, and to be sensitive to the issues of plant cultivation. Plans have also been made for the restoration of the Interlaken Boulevard, and for a section of the Lake Washington Boulevard, both of which were designed by the Olmsted Brothers as part of their

comprehensive park plan for Seattle in 1903, 1906, and 1909.

A number of interesting examples are currently being devised for landscape preservation. Kubota Gardens in South Seattle is a designated landmark, which is of great significance as an example of the work of Fujitara Kubota, who created a number of Japanese-style gardens in the region. However, Mr. Kubota frequently used a range of plants that are richer in both color and texture than those employed in the gardens of Japan. His own garden and nursery shows this particularly well with its large collection of Atlas cedars, both of the weeping and regular forms, as well as a number of variegated conifers. It will be important in the development of this property to retain the idiosyncratic and highly personal quality of Mr. Kubota's garden.

A detailed maintenance plan has been developed for the former garden of Arthur and Sophie Krauss on Lake Washington, designed by James F. Dawson of the Olmsted Brothers in 1929. Careful examination of the plans and letters, and a comparison of these with the existing garden has revealed that the original design was only partially executed. The evolving maintenance plan should address questions of overcrowding, shading and plant replacement in a way that respects the original *intent* of the design. It will be possible to do this without replicating exactly the original design.

A set of design controls has been developed for a designated Seattle landmark property on Queen Anne that has a large garden designed by John C. Olmsted in 1911. The sizes of the house and garden make it unlikely that a single owner will be able to maintain this property as a single-family home for much longer. The controls address these problems by designating sites in the service areas of the property for a series of low townhouses that can share the original motor court and the principal part of the original garden (which will be retained as a communal garden for the residents of apartments in the house and in the townhouses). The controls insure that as much of the original planting as possible will be retained and will be replaced in kind, when and if replacements are necessary.

Conclusion

I hope that the modest amount of historic landscape preservation that has been done nationally and locally will grow and not be given a low priority as a result of changing national priorities. In the Pacific Northwest region, much work still needs to be done. A very strong case can be made for the protection of representative examples of the work of a number of distinguished landscape designers such as The Olmsted Brothers, Otto Holmdahl, Fred Cole, Butler Sturtevant, and Roland Terry. A systematic process of listing gardens worthy of such protection needs to be instituted. Much could be learned from some European countries in the development of such programs, coupled with economic incentives to encourage private and public owners to have important historic landscapes designated and restored. Work of this nature that has been accomplished, both in this country and in Europe, testifies to the importance of establishing a strong continuity with the past as a celebration of cultural patrimony.

David C. Streatfield is an associate professor of landscape architecture, and urban design and planning, at the University of Washington, Seattle.

Bibliography

Beatty, Russell. 1989. "An Island in Time." *Pacific Horticulture* 50(2):61-70 (summer).

Fitch, James Marston. 1976. "Preservation Requires Tact, Modesty, and Honesty Among Designers." *Landscape Architecture* 71:276-280.

Harvey, R.R. 1977. "Documenting a Victorian Landscape in the Midwest." *The Association of Preservation Technology Bulletin* IX(3): 73-99.

Kelso, William M. 1984. "Landscape Archeology: A Key to Virginia's Cultivated Past." In *British and American Gardens in the Eighteenth Century: Eighteen Illustrated Essays on Garden History*, edited by Robert P. Maccubbin and Peter Martin. Williamsburg, Virginia: The Colonial Williamsburg Foundation.

Kunst, Lisa A., and P.M. O'Donnell. 1981. "Historic Landscape Preservation Deserves Broader Meaning." *Landscape Architecture* 7:53-5 (January).

Melnick, Robert Z. 1983. "Protecting Cultural Landscapes: Finding Value in the Countryside." *Landscape Journal* 2(2):85-97 (fall).

Streatfield, David C. 1979. "Standards for Historic Garden Preservation and Restoration." *Landscape Architecture* 59(3):198-204.

HERRON GARDENS

CUSTOM DESIGN
AND INSTALLATION

ANN HERRON
P.O. BOX 69
MEDINA, WA. 98039
454-1216

HERROG #137LQ

A Light in the Cottage

by Daniel Hinkley

Everyone has noticed the charming stone cottage at the Madison entrance to the Washington Park Arboretum. Below, a former occupant takes you on a tour through the tiny, historical structure.

The stone lodge, at the intersection of Lake Washington Boulevard East and Arboretum Drive is perhaps the most beloved structure in Seattle. The infatuation with the lodge is one of romance and mystery—a hybrid between Tolkienesque adventure and classical fantasy. It has never served its intended function—indeed, to this day, the structure's reason for existence and occupancy remains unresolved. Although the utilitarian purpose of the cottage has fallen short of its goals, the intended architectural effect that it delivers has been a remarkable success.

In 1936, the first of an uncompleted series of gate houses for the Washington Park Arboretum was designed by the firm of Loveless and Fey, and subsequently constructed in 1937 with joint funding provided by the Work Projects Administration and the University of Washington.

Arthur B. Loveless was one of a handful of architects in small firms that contributed importantly during the late twenties and early thirties to Seattle architecture. Among his works are the Coleman Building's 1930 update with its extant Art Deco street canopy (811 First Avenue), and, in the same year, the North Broadway Shopping Center (711 Broadway Avenue East). The latter is very similar to the Arboretum's gate house, with a common Old English or Norman provincial style. This style also was apparent when, in 1925, Loveless designed Bowles House which is described as a handsome rambling English Cottage (2520 Shoreland Drive South).

Wonderfully enveloped in mature plants, the stone cottage could be described as both *handsome* and *English*, however *rambling* will never be among the superlatives used in reference to the residence. The structure is based on a vernacular design common to the Cotswold District in England

R. Bruce Eckley

and characterized by steep, heavy-timbered, and slate roofs. The materials provided by the University of Washington were of local origin: rough cut Enumclaw granite and Douglas-fir timbers. Copper was used as the roofing material. Although in reality the cottage has less than 425 square feet of living space, monumentally scaled design features belie the intimate spaces within. The solid stone walls, over two-feet thick, contribute greatly to the charm of the cottage, but at the expense of potential internal space. Ironically, it may be due to this excessive wall thickness that the cottage is at all livable today. The structural fortitude of these walls provides an environment of safety and sanity to its occupants living only fifteen feet away from one of Seattle's more heavily traveled arterials!

An equally delightful structure, intended to be the second in a series of traffic control points for the Arboretum, was built concurrently and used the same materials as the stone cottage. A small, round building with a conical cedar shingled roof, the Stone Guard Kiosk, stood at the intersection of Lake Washington Boulevard East and East Interlaken. It was damaged by vandals in 1954 and subsequently removed.

Before the stone cottage was actually completed, public sentiment grew against the proposed fencing of the park, and the use of the gate house and kiosk for traffic control. Much of this concern came from adjacent property holders and the early founders of the Arboretum who wished to see the "open rambling nature" of the park maintained. This sentiment soon developed into policy and the two stone gate posts still seen today in front of the cottage have served only as silent sentinels to the ever increasing

traffic volumes on Lake Washington Boulevard East.

The function of the stone cottage to this day has been that of housing for gatekeepers and employees of the Arboretum, as well as University students. Upon their arrival from England in 1946, Director Emeritus Brian Mulligan and his wife Margaret spent their first Seattle winter there. It would seem a befitting transitional residence for an immigrating English couple, however the Mulligans, citing dampness as a major objection, were anxious to move on to a more traditional American dwelling the following spring.

The spartan living quarters inside the cottage generally are a disappointment to the first-time visitor with expectations of oak panels and slate floors. The kitchen could best be described as a culinary closet, though to the dweller's delight, there is a stone fireplace opposite the main window of the living room. A half bath and a comparatively generous foyer complete the inside tour.

Present-day occupants have found life in the cottage to be somewhat challenging. Insidious clouds of road dust settle over everything and the assault on one's privacy becomes tiresome. The cottage imagery perpetuates the childhood ritual of "knock and run" as well as deceiving Arboretum visitors in search of the Japanese Garden or the nearest rest room. The electrical, heating, and plumbing systems are long overdue for renovation. On the other hand, a marvelous 197-acre landscape awaits outside the back door and the resident enjoys the unique position of caring for and at times defending a valued Seattle institution.

The political policies of ownership in Washington Park Arboretum present serious problems when the question of financial responsibility has arisen. The stone cottage was constructed partly by federal funding on City property for University use. The gray haze of responsibility creates a tenuous time for a building when questions are asked concerning the feasibility of maintaining the integrity of a deteriorating structure versus alteration or removal. Though there is no imminent danger of losing the stone cottage, it is my hope that this lodge will long remain magical for Seattle's children of all ages, and a home to appreciative occupants. A home whose windowed light for over 50 years has warmed the nights of a botanical kingdom.

Dan Hinkley and his dog Emerson occupied the stone cottage from 1983-1985. Dan received his master's of science from the Center for Urban Horticulture in 1985. He currently is a full-time educator in horticulture at Edmonds Community College, north of Seattle, and a member of the *Arboretum Bulletin* editorial board.

R. Bruce Eckley

(Upper right) A 1940 photo by F. Leissler, then assistant director of the Arboretum. (Left) In 1989, the vegetation is lush around the stone cottage.

The Naming of Foster Island

by Valerie Easton

The island at the north end of the Washington Park Arboretum's waterfront trail is about one-third of a mile across. It links the major portion of the Arboretum to Lake Washington and Marsh Island, providing a bird sanctuary and waterfront trail. Is it correctly named Foster Island *or* Foster's Island?

The marshy lagoons and native woods of the Arboretum's waterscape area have a confusing and somewhat cloudy history. Foster Island was not part of the original Washington Park area, but rather was purchased by the City of Seattle for $15,000 in 1917 from the McGilvra Estate. The Island was considerably smaller in those days, as Lake Washington was higher before the opening of the ship canal and locks.

When the canal was dredged, much filling was done in the marshy areas, enlarging and shaping the site. When the Evergreen Point Bridge was built in 1963, the Washington Park Arboretum lost about 60 acres, ("The Last 25 Years in the Arboretum" by Brian Mulligan in *The University of Washington Arboretum Bulletin*, 48:3, fall 1985). It was at this time that University of Washington officials decided to make the best use they could of the area of lagoons and marshes that remained.

The master plan for the Arboretum prepared in 1964 by landscape architects Sasaki, Dawson, and Demay included potential development of Foster Island with a nature trail, foot bridges, and boat landings ("Arboretum Waterfront Trail" by Eric W. Hoyte in *The University of Washington Arboretum Bulletin*, 31:2, summer 1968). This was the beginning of the Foster Island area that exists today.

Dredging of Foster Island, 1938 (UW Archives).

But, back to the name. Both of the names *Foster Island* and *Foster's Island* have been used interchangeably through the years in articles and on maps, by Arboretum curators, landscape architects, and people from the Arboretum Foundation, the City of Seattle Parks Department, and the University of Washington.

According to A.K. Free, a Seattle map collector and Arboretum Foundation member who resides in the Laurelhurst area, a United States Geographical Service (USGS) quadrangle map printed in 1897 designates the area as Foster Island. Mr. Free points out that island names are not usually in the possessive. Examples are the islands discovered by and named after Captain James Vashon and Captain George Vancouver. However, in the Olmsted planning report of 1903, the names Foster and Foster's Island are both used. Fourteen years before Foster Island became part of the Arboretum, its correct name was already unclear.

The Origin of the Name

There are several possibilities for the origin of Foster Island's name. It would not have been unusual for an early map maker to name it for unknown reasons. It could have been named after Joseph Foster, a prominent Seattle citizen of the late nineteenth century who was a colleague of Arthur Denny. Denny was involved in the original negotiations to have the University of Washington located in Seattle (see Neal O. Hines' book *Denny's Knoll: A History of the Metropolitan Tract of the University of Washington*, Seattle: University of Washington Press, 1980).

Another story has it that Foster Island was named by a realtor in Seattle's Fremont community who operated a steam vessel, *The Maude Foster*. The *Maude Foster* was named after O.C. and Anne Foster, residents of Des Moines, Washington, south of Seattle, who had given some property at the south end of the Arboretum. This colorful story, told by Seattle Parks Department historian Don W. Sherwood, remains unsubstantiated.

You may know the true story or more stories. If you can verify, disprove, or better yet, add to our knowledge of Foster Island's history, write to the *Arboretum Bulletin* editor.

Valerie Easton is a librarian in the Miller Library, Center for Urban Horticulture, University of Washington.

Northwest Hort Review

by Van M. Bobbitt

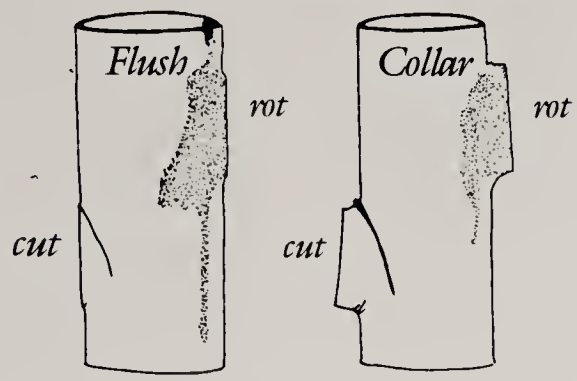
Wound Dressings for Trees: Do They Work?

Recommendations about wound dressings have changed. Although the *Sunset Pruning Handbook* (1952) states that "... a very valuable addition to your pruning kit is a can or bucket of tree wound compound," the book's 1983 version does not mention wound dressings. Why the omission? Because wound dressings have fallen out of favor over the past 30 years.

Commercial wound dressings often claim to aid the healing of pruning cuts, to seal out disease organisms, and to prevent excessive sap flow. But research has shown that these products seldom live up to the claims of their manufacturers.

In 1970, Dr. Dan Neely published a research report, "Healing of Wounds in Trees," which appeared in the *Journal of the American Society for Horticultural Science*. He tested five wound dressings: shellac, acrylic latex house paint, petrolatum, asphalt emulsion tree wound dressing, and asphalt aerosol wound dressing spray. At the end of the three-year experiment, he found that "not one wound dressing used was of appreciable benefit in increasing the rate of wound healing."

Plant pathologists Dr. Alex Shigo and Dr. Charles Wilson published another report on the subject in 1977. Over a five-year period, they tested the effectiveness of three commonly used wound dressings—orange shellac, polyurethane varnish, and asphalt dressing—on red maple and American elm trees. They found that the wound dressings did not control the spread of wood decay or the presence of decay fungi. Tests indicated that the asphalt dressing, the most commonly sold commercially, was most detrimental of all the treatments.



Toni Haun, illustrator

Current Recommendations

Wound dressings are considered primarily of cosmetic use. But if you feel that you must use an asphalt-type dressing it should be applied in thin coats. Thick coats can crack, which allows moisture to accumulate under the dressing.

Do Tree Wounds Heal? Not Really.

Traditionally, the term *heal* was used to describe the process by which callus tissue grows over a pruning cut or other plant wound. But the use of the term is being discouraged by many plant scientists. As Dr. Richard Harris, author of *Arboriculture* puts it:

> Plant wounds do not "heal" in the sense that animal wounds heal. An animal wound usually heals from the inside out, replacing dead and damaged tissue; a surface scar may be the only sign of an earlier wound. In woody plants, however, wounding breaks or destroys the cambium so that the original wound remains, and though it may eventually callus over, wood may decay in what appears to be a sound trunk. It is more appropriate to speak of wound closure or callusing than wound healing.

Instead of healing a wound, trees tend to wall off and contain the damaged area, a process called *compartmentalization*. The tissues surrounding the wound go through chemical and physical changes which form a protective barrier that keeps decay from spreading.

Arborists now recommend the following:

1. **Do not scrape decayed wood from wounds and cavities**. This is discouraged, since it is likely to break the protective barriers around the damaged area and allow the decay to spread more easily into the healthy wood.
2. **Do not drill drain holes**. Many trunk cavities will hold water. This was thought to encourage rot, so arborists often drilled drain holes. This will also tend to break the protective barriers around the wound.
3. **Use collar cuts instead of flush cuts**. These cuts do not leave a stub, but they preserve the collar at the base of a branch. The tissues in the branch collar have a better ability to compartmentalize than those tissues just beneath the collar. Therefore, less extensive decay is associated with collar cuts than with the traditional flush cuts.

Van M. Bobbitt is the coordinator of continuing education, Center for Urban Horticulture, at the University of Washington. He is a member of the *Arboretum Bulletin* editorial board.

Book Review

Garden Style. Penelope Hobhouse. Little, Brown & Co., Boston and Toronto: 1988. 216 pages.

I'm a real fan of Penelope Hobhouse's two most recent books, *Garden Style* (1988) and *Color in Your Garden* (1985). Gardening books are often strong in one area, but weak in another. I may find a book with beautiful, inspiring photographs, but very little substance to the written text. Sometimes the reverse is true—a well-written book with real depth that is a treat to the mind, but few if any photographs to satisfy my visual sense. Penelope Hobhouse's books combine both qualities—exceptional photographs and high quality, informative writing.

Garden Style could easily be titled "Garden Making," since it addresses the main components and considerations that are involved in making a garden. One chapter is devoted to garden structure and its importance to a garden. She uses the term *structure* to describe the elements that enclose and shape the garden, much the way an architect uses walls, ceiling, and floor to form the structure of a room in a house. She also points out that in a mature garden, the structure often is masked by foliage and not immediately visible, although it is still there and an essential element.

The book then moves on to discuss considerations for filling out or embellishing the garden to create a complete picture. The emphasis shifts to flowers and color, fruit, unique leaf shapes, and sizes. This stage of garden development is analogous to furnishing a room in a house, something that develops over time, with many adjustments, until it reflects the taste and personality of the owner. Ms. Hobhouse uses historical gardens to illustrate her ideas, drawing heavily from famous English gardens. If the aesthetics of a garden interest you, take a look at this book.—Reviewed by Mary Booth

---

Mary Booth is a landscape architect, chair of the Seattle Design Commission, and a member of the *Arboretum Bulletin* editorial board.

For Further Information

by Valerie Easton

In this centennial year, interest and enthusiasm have increased about the plants and gardens of the past.

The field encompassing the history of plants and gardens is a rather large one. As a result, there are many excellent titles and sources of information in the Elisabeth C. Miller Library, Center for Urban Horticulture. Following are some of the more interesting publications.

Books

Hedrick, U.P. A History of Horticulture in America to 1860 (with an addendum of **Books Published from 1861-1920** by Elisabeth Woodburn). Portland: Timber Press, 1988. This is a new reprint of a scholarly history by the well-known horticulturist who authored *Fruits of New York*. It is noteworthy for its addendum by Elisabeth Woodburn, an expert in horticultural literature. Woodburn has arranged a narrative history of horticultural books chronologically by subject, with regional emphasis. For instance, under the heading "Practical Horticulture" is listed *Pacific Rural Handbook: Containing a Series of Brief and Practical Essays and Notes on the Culture of Trees, Vegetables, and Flowers Adapted to the Pacific Coast* by Charles H. Shinn, published in San Francisco in 1879. It probably served Pacific Northwest gardeners well as a forerunner to the *Sunset Western Garden Book*. This fascinating, illustrated history of horticultural books not only informs us of what was published when, but also shows trends and progress in horticultural thought and practice.

Leighton, Ann. Early American Gardens: "For Meate or Medicine." Boston: Houghton Mifflin, 1970.

Leighton, Ann. American Gardens in the Eighteenth Century: "For Use and For Delight." Amherst: University of Massachusetts Press, 1986.

Leighton, Ann. American Gardens of the Nineteenth Century: "For Comfort and Affluence." Amherst: University of Massachusetts Press, 1987.

Beginning with descriptions of the seventeenth century gardens created by the earliest settlers in the New World, this excellent series traces the development of gardens in America up through the 1800s. The author quotes books, letters, and other materials of each century to provide a thorough picture of the interrelationships of the influential people with the social, economic, and garden histories of the times. During these three centuries, Leighton traces changes in gardening psychology and practices, starting with the early New Englanders' importing of plants from the old country and their adoption of useful "Indian plants" for their own gardens to the summer houses, specialty gardens, and topiary of the later nineteenth century. Each volume has extensive plant lists to aid the author's intent "to make the gardens of the early settlers of New England grow again." Each list includes descriptions of the plants most commonly grown in each century.

Schmitz, Henry. The Long Road Travelled. Seattle: Arboretum Foundation, 1973. A little closer to home is this account of forestry in Washington State in the last hundred years and the development of the College of Forest Resources at the University of Washington. Of special interest is the lengthy chapter on the history of the Washington Park Arboretum. Wonderful historic photos of the Arboretum and the people involved in its development highlight this detailed account of its political and planting history. It is fascinating to read how the early aspirations for an arboretum in Seattle reflect the continuing goals and hopes for the Arboretum today.

Stuart, David, and James Sutherland. Plants from the Past: Old Flowers for New Gardens. New York: Viking Press, 1987. As heirloom plants become more popular in today's gardens, this selective guide to the beautiful, colorful, and fragrant flowers of the past is very welcome. The histories are given of many well-known and some rarer flowers, both European and more ancient, along with suggestions for their use in period designs. While it is interesting to learn that seventeenth century ladies liked to pin fritillary on their sleeves, the more serious theme of this book is that of conservation: Many of these flowers, grown for centuries, are in danger of extinction.

Thacker, Christopher. The History of Gardens. Berkeley: University of California Press, 1979. This is a thorough worldwide history of gardens, from the first natural gardens of the Greek gods, through the pleasure gardens of Rome and Persia; and from the development of the formal gardens of Europe to contemporary sculpture gardens. Thacker, a leading expert in the field of garden history, draws from examples of unusual and exotic gardens, such as gothic grottos, medieval cloister gardens, and the lost garden that was built four hundred years ago on a tiny island in the Bosphorous Sea. Using such examples, he effectively shows the variety, beauty, and mystery of gardens throughout the centuries.

Journals

Journal of Garden History, an international quarterly, Taylor and Francis Ltd., 4 John Street, London, WC1N 2ET, UK. This beautifully illustrated scholarly journal has an emphasis on the documentation of individual gardens in all parts of the world. It has a multi-disciplinary approach and covers aesthetics, botany, horticulture, and the conservation and restoration of gardens.

Seed Exchanges, Catalogs, and Nurseries and Gardens

The interest in gardens of the past includes preservation of the older varieties of plants and seeds. This insures genetic diversity, and giving the gardener varieties of vegetables, fruits, and flowers bred over many years for special characteristics of flavor, color, bloom time, and disease and pest resistance. Following are examples of catalogs, nurseries and gardens, and seed exchanges that specialize in these heirloom plants and seeds.

Seed Exchanges

Two seed exchanges for old-fashioned flowers are:

Flowers, Wildflowers, and Herbs Exchange. Ann Taft, Box 6451, Pauma Valley, CA 92061.

Old Thyme Flower and Herbal Seed Exchange. Barbara Bond, Route 1, Box 124A, Nebraska City, NE 68410.

Catalogs

Abundant Life: Seeds and Books. 1988. The Abundant Life Seed Foundation, P.O. Box 772, Port Townsend, WA 98368. Specializing in heirloom seeds for the Northwest, this catalog lists vegetables, fruit, flowers, wild flowers, grain, herbs, trees, and shrubs.

The Antique Rose Emporium: Mail Order Catalog. 1988. The Antique Rose Emporium, Route 5, Box 143, Brenham, TX 77833 (509) 836-9051.

Roses of Yesterday and Today, Old-Rare-Unusual Roses. 1988. Roses of Yesterday and Today, Brown's Valley Road, Watsonville, CA 95076 (408) 724-3537.

Seeds Blüm: Heirloom Seeds and Other Garden Gems. 1988. Seeds Blüm, Idaho City Stage, Boise, ID 83706. Seeds Blüm is the largest and best known of the seed companies specializing in heirloom seeds. Most of their offerings have been on record for at least 100 years. Planting information is included, along with listings of numerous varieties of vegetables, grains, flowers for drying and cutting, edible flowers, Indian and Asian specialties, etc.

Nurseries and Gardens

The Old Rose Garden, 17908-80th Avenue N.E., Bothell, WA 98011 (206) 483-4533. The Old Rose Garden specializes in old, rare, and unusual roses and perennials. The small nursery is open from May to October with over 1,300 varieties of roses, surrounded by perennials, all set in arbored gardens in the nineteenth century English cottage-garden style.

Point Ellice House Garden, 2616 Pleasant Street, Victoria, British Columbia, (604) 385-3837 or (604) 387-5953. This historic residence, built in 1861, was the home for more than a century of the O'Reillys, a prominent British Columbia family. Its garden is now being restored to the time period between 1889 and 1914. When the house was sold to the government in 1975, many family diaries, notebooks, receipts, photos, and seed and flower catalogs were left behind. They have proven instrumental in the faithful recreation of the original Victorian gardens. When completed, the gardens will have hundreds of varieties of flowers, and be the most complete and thoroughly documented collection of Victorian plants in North America.

New on the Shelves of the Elisabeth C. Miller Library

VALERIE EASTON

Boisset, Caroline. **Vertical Gardening: Climbing Plants, Hanging Plants, Trellises, Wall Planting, Terraces, Window Boxes**. New York: Weidenfeld and Nicolson, 1988.

Chalk, Douglas. **Hebes and Parahebes**. Portland: Timber Press, 1988.

DuPuy, David, and Phillip Cribb. **The Genus Cymbidium**. Portland: Timber Press, 1988.

Nooden, L.D., and A.C. Leopold, editors. **Senescence and Aging in Plants**. San Diego: Academic Press, 1988.

Kreisman, Lawrence. **The Bloedel Reserve: Gardens in the Forest.** Seattle: The Arbor Fund, 1988. (full review by Brian Mulligan in next issue).

Stewart, Joyce. **Orchids**. Kew Gardening Guides. Portland: Timber Press, 1988.

Waring, Richard H., and William H. Schlesinger. **Forest Ecosystems: Concepts and Management**. San Diego: Academic Press, 1985.

From The Bloedel Reserve: Gardens in the Forest.

Valerie Easton is a librarian at the Miller Library, Center for Urban Horticulture and the book review editor of the *Arboretum Bulletin*.

These books can be found at the Elisabeth C. Miller Library, Center for Urban Horticulture, 3501 N.E. 41st St., Seattle, WA. Hours: 9-5, Monday to Friday.

Special thanks to the individuals and organizations who have contributed these books to our library.

Errata

In volume 51, number 3, Demi Bown's name was misspelled on page 24. *Lords and Ladies* was published in 1960.

In volume 51, number 4, Brian Mulligan should be credited with the back cover photograph.

THE ARBORETUM FOUNDATION

Invites you
to visit our unusual gift and book shop
in the
Donald G. Graham Visitor Center
2300 Arboretum Drive

weekdays 10am to 4pm
weekends noon to 4pm

"Treasures for you to enjoy and to share with those you love."

UNCOMMONLY
BEAUTIFUL

WELLS MEDINA
NURSERY
8300 Northeast 24th Street, Bellevue
454 1853

Molbak's
Greenhouse,
Nursery & Florist

9:30 to 6, 7 days
Fridays until 9
13625 NE 175th
in Woodinville
Phone 483-5000
(or from Bellevue
454-1951)

Molbak's

GARDEN CENTER · NURSERY · FLORIST · GIFT SHOP

Japanese Horticulture Tour '89

A Survey of Japanese Fruit Growing

October 2 - October 15

featuring

Fruit Research Stations
Nurseries•Orchards and Farms
Temple Gardens•Produce Markets

Tour Leader:

DR. ROBERT NORTON,
Research Horticulturist
Washington State University

For more information contact:

Frank Miller
(206) 527-4852

Tour Includes:

- Farms Visits and Home Stays
- Japan's Finest Gardens
- Tokyo's Produce and Fish Markets
- Kyoto's Temples and Shops
- Pre-Departure Seminar
- Round Trip Airfare
- Japan Rail Pass
- All Accommodations
- Escort
- Transfers
- Breakfasts

14 Days

$3195

Asian Sky Travel Service / Inside Asia Tours, 100 NE 56th St., Seattle, WA 98105

Published by the
Arboretum Foundation
Washington Park Arboretum
University of Washington XD-10
Seattle, Washington 98195

An *arboretum* is a living museum of woody plants for education, conservation, research, and display.

NON-PROFIT ORG.
U.S. POSTAGE PAID
SEATTLE, WASHINGTON
Permit No. 126